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MOUNTAIN WARFARE ON
THE SAND MODEL

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MOUNTAIN WARFARE ON THE SAND MODEL

By

MAJOR D. B. MACKENZIE

B.A. (OXON)

5th Bn. The Frontier Force Rifles
Indian Army (Retd.)

THREE SHILLINGS & SIXPENCE NETT
(Per Post, 3/9)

ALDERSHOT
GALE & POLDEN, LTD., WELLINGTON WORKS
AND AT LONDON AND PORTSMOUTH

PRINTED IN GREAT BRITAIN BY
GALE & POLDEN, LTD.,
WELLINGTON WORKS, ALDERSHOT

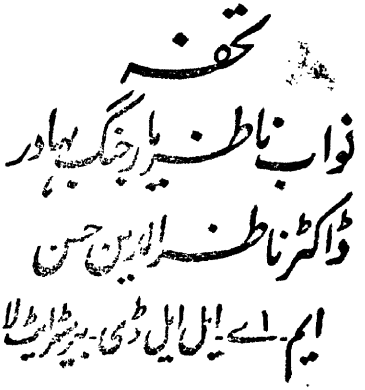
P. 7168.

TO

THE BRITISH AND INDIAN OFFICERS AND MEN

OF THE

5TH BN. THE FRONTIER FORCE RIFLES



FOREWORD

THIS little book contains much that is useful to units which are stationed on the North West Frontier of India or which may find themselves having to soldier there in due course. Everyone who has served for any length of time on the Frontier or in mountainous districts knows how carefully our troops have to be trained in Mountain Warfare and how nothing can be left to chance. In those Stations which afford no opportunities for such training it is difficult to realize what Mountain Warfare really means. The Sand Model worked in accordance with the instructions contained in this book affords a good solution, and I commend it to all.

Claud W. Jacob.

Field Marshal.

PREFACE

The Tribesmen.

" A great many people have tried to describe Afghan character, and found it difficult, because it is a mass of contradictions. They are often recklessly brave, and nearly always brave, yet rather easily discouraged by failure. Very proud of their race and of their honour, yet often treacherous and faithless. Capable of extraordinary loyalty, yet capable of extreme vindictiveness against a friend on account of even an imaginary wrong. Observant and intelligent, yet credulous and superstitious. Paying little attention to their religion normally, they can easily be worked up to fanaticism. Inclined to be lazy, yet with immense reserves of energy, and power of endurance, and often at their best under the worst circumstances. Cheerful, sportsmanlike, and frugal, but excitable and lacking in self-control. A strange mixture. However you size them up, their virtues and vices are at least virile and those of men, and few Britishers are not attracted to them. Lastly, they are clever and plausible at arguing. But do remember that it is never, at any time, safe to rely on their faith to carry out a promise unless they know you have the power to enforce it. To Afghan mentality it is stupid to do something you don't want to, unless you must."

—A quotation from " Letters of a once Punjab Frontier Force Officer," by Colonel J. P. Villiers-Stuart, C.B., D.S.O., O.B.E.

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MOUNTAIN WARFARE ON THE SAND MODEL

INTRODUCTION

The Principles of War.

" The Manual of Operations on the North-West Frontier of India " (referred to throughout the following pages as the " Manual ") Chapter I, Section 1, states :—

" While the Principles of War enunciated in Field Service Regulations, Vol. II, Sec. 2, remain unchanged, in campaigns in undeveloped and semi-civilized countries the armament, tactics and characteristics of the inhabitants and the nature of the theatre of operations may necessitate considerable modification in the methods of application of those principles."

It is this modification in the methods of application of the principles of war which make it necessary for all ranks and all arms, but especially the infantry, to acquire a high standard of training in the technique of frontier warfare.

The tribesmen are highly mobile, entirely independent of communications, have no knowledge of the Articles of War, and no medical service. Loot of every kind, especially rifles and ammunition, is eagerly sought for. Prisoners and wounded who are not Moslems nor worth holding for ransom are liable to receive no quarter, and may also be mutilated when dead, the latter being of more concern to members of the Indian religions than to Christians.

A battalion newly arrived on the Frontier is carefully and closely watched by the tribesmen both in barracks and on training, and should the " suspicious mind " not be in evidence, or should local protection **at all times** not be fully provided, the fact is at once noted, and if the mistake is repeated a regrettable incident will inevitably be the sequel.

It is even said that the Pathan studies the Commanding Officer's psychology, and, being a quick and accurate judge of character, as are most semi-civilized races, speedily decides if further scrutiny is likely to give opportunities for acquiring rifles. A rifle over the frontier costs more than an average wife, and much ingenuity and daring will be expended to obtain one. Unnecessary risks are eliminated with great care, and the plan for a raid fully thought out and made as nearly watertight as possible.

A book could be filled with stories of rifle thefts, but one is enough. The guard of a regiment in a station some ninety miles from the Frontier occupied a guard-room on a road running out of the cantonment, the surrounding country being intersected with deep nullahs and covered with scrub. The guard-room had a window with a loose bar at the back, and a nullah offering a convenient line of approach and withdrawal. One evening, just at dusk, two " scallywags " came down the road. As they approached the guard-room they began an argument which ended in blows and a fierce rough-and-tumble in the road in front of the guard-room. The soldier's love of a fight brought all the guard to the front veranda, and the inside sentry to the front window. After a few minutes the fight ceased, and the combatants passed on down the road still arguing fiercely. The guard returned to the guard-room to find the rifles gone.

Security.

It is this capacity which the Pathan possesses of never missing an opportunity which compels unceasing observance of the principle of security, and makes special training and a high standard of efficiency imperative. At present columns have to be accompanied by a long train of animals (see " Manual," Sec. 5, para. ii), and thus have to move by the valleys, while the tribesmen can move over the hills. This makes security even more difficult to guarantee. Should it be possible in the future to maintain a column entirely from the air, it can then move lightly equipped along the hills, and deprive the tribesmen of this advantage of command. Food, water, ammunition, etc., can be demanded by wireless and dropped by parachute into the camp every evening, also paper blankets, and the latter used as fuel the following day. There is, however, one essential service which aeroplanes cannot at present carry out, the picking up of sick and wounded. Until an efficient and powerful helicopter is available, which can land on and take off from a rocky hilltop, mobile columns of any size, and which are to operate for more than two days, must have pack transport, keep to the nullahs, and piquet the heights.

The tribesmen may not give quarter, therefore wounded must be picked up. Every rifle, round of ammunition, or load of stores which they can steal or capture assists them to prolong the struggle. Small reconnoitring parties, such as reconnoitring patrols, cannot be sent out except under cover of the rifles of the camp or of piquets. This imposes further caution on all our movements until such time as the enemy can be induced to stand and fight, and thus give the opportunity to our forces to inflict such casualties as may bring the tribesmen to reason.

Need for a Piqueting System.

It is this need for security and caution which makes an efficient and rapid system of hill piqueting vital to the advance of a column. Marches must be completed in daylight, as pack animals straggling in the darkness of a nullah are certain to invite attack under circumstances favourable to the tribesmen. Columns of pack animals moving of necessity on a narrow frontage become of great length. The tail of the column leaves camp some hours after the head, and the necessity for the last animal being safe within a defended perimeter before dark shortens the possible length of march in spite of the most rapid and efficient system of piqueting. There must, therefore, be no avoidable delay in the posting and withdrawing of piquets, or the last piquets may be left on the hills after darkness has fallen, and have to remain up all night, probably without food or blankets, or be withdrawn under circumstances of considerable difficulty and danger.

Piqueting.

Efficient piqueting calls for—

(*a*) A trained eye for ground ;
(*b*) A thorough knowledge of enemy tactics ;
(*c*) Initiative, resource and self-reliance ;
(*d*) Constant alertness ;
(*e*) Practice in giving and receiving orders to piquets quickly and accurately ;
(*f*) Physical fitness, and the ability to move in fighting order rapidly up and down hill on the roughest of ground ;
(*g*) A thorough knowledge of the drill of piqueting ;
(*h*) A careful study of the maps, and aeroplane photographs if available, by the officer responsible for deciding the position and strengths of piquets ;

and all the above, except the last, are demanded from all ranks down to the most junior section leader.

The Method of Piqueting.

The acquiring of information on the drill and details of piqueting is not easy. The " Manual of Operations on the North-West Frontier of India " gives the essential outline, and the details exist in the Standing Orders for War of Battalions and Brigades on the Frontier, which are, in many cases, the outcome of some eighty years of hard-won experience in numerous minor operations, as well as in the many expeditions and wars up and down

the Frontier. The system varies in small details with different battalions and brigades, and no claim is, therefore, made that the system given in this book is the best. It is hoped that it is sound, and may help to develop the ability to know what to expect and how best to deal with it. Should arguments arise on any point, the answer will in all probability be found in " Passing It On " (General Sir A. Skeen, K.C.B., K.C.M.G., C.M.G. Gale & Polden, Ltd.), the most comprehensive and up-to-date book on the subject.

Changes in Tactics.

In the attack or withdrawal in civilized warfare, covered lines of approach and withdrawal are carefully sought for and used. In frontier warfare when in contact with the enemy all movement should be on the spurs, and nullahs should be studiously avoided as being likely to become death-traps, by allowing the enemy to make use of his great mobility and knowledge of the ground to work round the flanks at close range. Numerous historical incidents in support of this can be found in " Small Wars, their Principles and Practice " (Colonel Caldwell).

The Suspicious Mind.

The average British officer or soldier, brought up in an atmosphere of honesty and peace, in spite of—or because of—his education, is a mere child when compared in subtlety or cunning with the Pathan boy of sixteen. The latter has learnt to rely from very early years on his wits, not only for his bread, but also often for his life. He is accustomed to regard a clever thief with respect, and takes no person and no occurrence at its face value. Therefore, in dealing with him, we must acquire the same mentality. " You can easily outwit the Pathan if you set out to do it, because by setting traps instead of walking into them you take the initiative, and keep him guessing " (" Passing It On," Chapter I). I once discussed with an Arab his views on education for girls. What he seemed to consider his best argument against the proposal could be summed up as : " If you educate a boy's mother as well as his father, from where will he get his cunning ? He'll grow up soft and get ' done down ' right and left." There is a seam of truth in this. In the East education seems to tend to sap manliness and alertness.

Value of the Sand Model.

Units stationed elsewhere than on the North-West Frontier seldom have suitable training ground available, and even in Frontier stations it is often far from easy to find hills of the right size and shape for elementary training. The necessary practice

in the correct use of the ground is not easy to acquire and is quickly lost unless constantly practised. Useful instruction and practice in the drill and elements of piqueting can, however, be obtained on the Sand Table, on which it is easy to produce the type of ground most suitable to make clear any particular lesson, and to vary the ground to drive home a point.

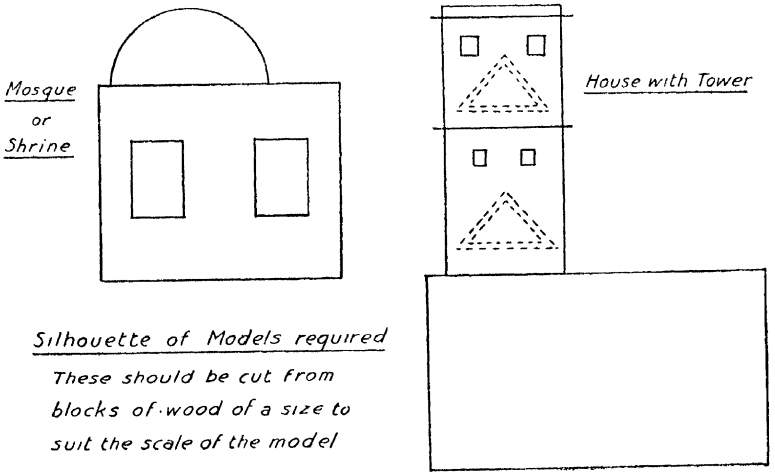
The Sand Table and its Appliances.

The Sand Table required must have sides considerably higher than the normal. There is no need, however, to make a new model; pieces of thick cardboard or of thin plywood from tea cases can be lightly nailed along the inside of the sides of the model. This will allow the hills to be piled up along the sides of the model. It is best to leave the ends of the model at their normal height of two or three inches. The eye can then be brought to "ground" level and a natural view of the landscape obtained. This is very desirable in choosing piquet positions.

Big hills entail much material, and anyone who has helped to move even the normal sand-table knows how heavy and unwieldy it is. If fine sawdust be mixed with the sand in approximately equal proportions, the weight can be much reduced, and at the same time the colour and surface of the ground can be made much like the "terra-cotta" coloured stony hills of the Frontier.

Other appliances required are :—

(*a*) Powdered blue chalk or dyed sawdust to represent streams.



(*b*) Moss to show low scrub.

(*c*) Brown tape of two widths, ¼ inch wide for footpaths, ½ inch wide for roads.

(*d*) A few wooden mosques and forts (see diagram, p. 5).

Crops and grass are sufficiently scarce to have little bearing on normal tactics, and can therefore be omitted.

After the building up of the sand-sawdust mixture, finger and hand marks can be most easily smoothed out with a small hand-brush such as is used for sweeping floors.

Scales.

The horizontal and vertical scales can be varied to suit the size of model available. Whatever vertical scale is adopted, it should be large enough in proportion to the horizontal scale to exaggerate sufficiently the steepness and size of the hills. Unless this is done, the model will look unduly flat.

THE ADVANCED GUARD

[NOTE.—The following remarks are included to make the Sand Table Exercises which follow more easily understandable by those who have not had previous experience of Frontier warfare.]

The main object of the Exercises is to give detailed and full instruction in piqueting. In order, however, to get logically " into the picture," it is necessary first to get a clear idea of the formation of the advanced guard plus piqueting troops, and the duties of each of the various component parts. The diagram should be studied closely.

It is often desirable for the advanced guard commander to give his whole attention to the piqueting, on which hangs the safety from flank attack of the whole length of the column throughout the march. To this end he can detail his second-in-command to control and co-ordinate the movements of the vanguard and main guard.

A detachment of the battalion signallers usually accompanies advanced guard headquarters, and if sufficient are available two are sent with each piquet on outstanding peaks, and with such as are far from the line of march. The signallers on the high peaks can establish a chain of stations from the advanced guard to the rearguard, and thus ensure communication throughout the length of the column, a very important matter.

The object of the advanced guard is to keep advancing, and though it must not risk annihilation in an ambush, it should as a rule push on ahead of ascending piquets until held up. Being able as a rule to move extended and in depth, it should, by a skilful use of ground and covering fire, be able at least to hold its own against any attack from the flanks. The " Manual " is not as definite as it might be in this matter, but the following quotation is helpful :—

" No need to enlarge on the work of platoon or company commander with the main guard or vanguard. The ground has

NOTE.—War Establishments (India) allow for only one light automatic section in each platoon ; the gun is carried with its ammunition on a pack mule. Further, each company normally has its own ammunition reserve, water and tools (each one pack mule) with company headquarters.

NOTE.—Exercises 1 to 5 are framed to give instruction in piqueting, starting with every small detail of the one-section piquet, and ending with a platoon piquet. To show how the piquet is sent out from the column, and how it is withdrawn, it is necessary to include before Exercise No. 1 an explanation of the formation and duties of the advanced guard, and before Exercise No. 2 a similar explanation of the rearguard.

to be cleared, and as soon as an enemy is suspected, fire and movement combined to get all forward with as little loss as possible, except to the enemy. The pace is really set by the flank piquets—by the delays in detailing them and by the slow process of getting into position. But those in the valley must not delay till these flank piquets are actually in position and ensuring a safe passage for the advanced guard, but must push on as soon as the piquets are launched and far enough forward to be able to assist the vanguard by spotting ambushes and by fire from above if the vanguard is attacked. Even this may be a counsel of perfection, for if the advanced guard checks till it is quite safe for it to get ahead, it has failed in its job, which is to clear the road as fast as possible for the column, not for itself, to move in safety. This I may say is a principle which I have seen advanced guard commanders forget. When they do they have no right to grouse if they suddenly find the column commander a few paces to their left rear and looking devilish.

"It is a difficult thing to gauge, though; if the vanguard gets ahead it may be ambushed, as it was at the Ahnai Tangi in 1920, and at Nili Kach in 1917, when the vanguard got ahead of two piqueting parties aiming at important heights. In this case the move was completely held up; in the former the main guard was at hand to help and got it out, though with losses. I can only advise you to watch the piquets going up, and try to keep two or three hundred yards ahead of the main guard and in touch with it. You will find the main guard halts frequently once piquets begin to go up, for minutes at a time, sending bunches of piquets off at each halt. Use these minutes to scout the vicinity, and never move in dangerous or intersected ground without arranging for close covering fire within the vanguard. . . . In fact, I cannot teach you much in this job beyond a warning that on your alertness depends not only the steady progress of the column, but, and very much, your own safety."*

All small hills close to the line of march on either side, of a few hundred feet in height, should be overrun by the vanguard and main guard, which normally move deployed and frequently extended.

Advanced Guard Commander's Duties.

With the advanced guard commander there should be the following:—

(*a*) Company commander of leading company of piqueting troops.

* "PASSING IT ON." General Sir Andrew Skeen, K.C.B., K.C.M.G., C.M.G. Gale & Polden.

(*b*) Leading platoon commander of piqueting troops (the platoon should be some twenty yards in rear.) As each platoon and company is used up, the next-for-piquet moves up.

(*c*) The officer or non-commissioned officer in command of the machine guns attached to the advanced guard.

(*d*) The non-commissioned officer in charge of the attached signallers.

(*e*) The officer in command of the guns (if any) attached to the advanced guard.

(*f*) A diary-keeper, usually one of the Battalion Intelligence Section.

As the advanced guard commander rounds a bend in the valley along which the advance is being made, a new vista of hills flanking the route comes into view. The advanced guard commander halts, and rapidly runs his eye over the hills, comparing them with his map, which will help him to get an idea where the summits really are, and which are the most important tactically. He will then, guided by his experience, and by the provisions of Section 23 of the " Manual," decide where the piquets are to be, and send off as many as possible. The advanced guard commander should have a " pointer staff " (a staff some five to six feet in length, with an iron spike at one end and some form of sight at the other). The spike is set in the ground and the sight laid on what **appears to be** the best position for the piquet. The sight is usually made to fold inside a metal cover to save it from damage when the staff is in use as a walking-stick. The use of a pointer staff obviates any doubt as to the position indicated for the piquet, and saves the time which would be taken up by describing the position in a landscape usually devoid of prominent objects other than hill peaks, which are often very similar.

There is another form of pointer staff made in the shape of a parallel ruler with a sight on each parallel. It has the objection that it is liable to inaccuracies due to rough handling, and also wastes the user's time as he has to hold it to his eye all the time.

Value of Machine Guns.

It is usual for one or two sections of the Machine Gun Company to be attached to the advanced guard, to cover piquets up to their positions. While one section is in action ready to open fire instantly at the slightest sign of enemy movement on the hills, the other moves along about a hundred yards in rear of advanced guard headquarters, ready to receive orders for the support of a piquet. They thus proceed along the route " leap-frogging."

Duties of Company and Platoon Commanders.

The company and platoon commanders must have a statement of the strength of every section. The company commander prepares the piqueting slip (see Diagram).

Methods of Piqueting.

Methods of piqueting are :—

(*a*) Out and back—the usual method when a short advance is being made, to burn a village or for some other temporary purpose, and the column is to return by the same route the same day. In this case it is general for all, or the most advanced piquets, to remain up in position all day until withdrawn by the rearguard returning in the evening.

(*b*) Through piqueting—when the column is not returning to the camp from which it started. In this case piquets are withdrawn forward by the rearguard as it passes along the route.

In either case piquets withdrawn by the rearguard may be sent forward again to the advanced guard to rejoin the piqueting troops, and be sent again on piquet if the numbers of troops available for piqueting are insufficient to cover the whole route without this expedient.

Number of Piquets.

It is far better in every way to post the minimum number of strong piquets than a greater number of small ones. The "Manual" gives no definite guidance on the number of piquets necessary, but as a general rule it can be taken that ground between two piquets, visible to either and within eight hundred yards of either, can usually be left without a piquet. It is often very difficult to avoid being led into posting too many piquets, and thus by endeavouring to be safe everywhere, to be strong nowhere.

Serious opposition to piquet posting, unless the enemy intends to make a definite stand, is not likely. The enemy knows well that he will get a far better chance when piquets are being withdrawn.

Strength of Piquets.

One or more complete sections or platoons should be detailed for a piquet, sufficient to provide the minimum number of rifles called for by the advanced guard commander.

The strength of a piquet depends on a number of factors :—

(*a*) The distance of the piquet from the road horizontally and vertically.

(*b*) If the position chosen is naturally a strong one and whether it can be covered from the road or from neighbouring piquets.

(*c*) Whether the piqueting is purely precautionary—*i.e.*, to ensure that peaceful tribesmen are not given a chance to steal rifles, or if opposition to the advance is likely.

Light Piqueting.—If the movement of troops through tribal territory is in the nature of a peace march, piquets are put up only as a precaution against rifle thieves and to show that the suspicious mind exists. Such piquets consist generally of one or two sections. This is fine training, giving every junior section commander the chance to find out his shortcomings and air his knowledge and initiative.

Full Piqueting.—Where enemy opposition is expected piquets must be strong, a platoon or even a company if isolated or occupying a very large or important feature.

Permanent Piquets.—Where the temper of the tribesmen is really roused, and prolonged operations are contemplated, the long range and smokeless powder of the rifles with which the tribesmen are now armed make permanent piquets necessary. These are fully sangared and wired. Such piquets are outside the scope of this book.

The smaller the piquet, the higher the standard of training required by section commanders. There is no better way of learning a job than having to teach it ; if, therefore, section commanders and sections are well trained in light piqueting, then piqueting with larger forces with ample covering fire from machine guns and light howitzers, and more deliberate methods, should not present difficulties.

If the advance of a piquet is likely to be opposed, it will usually be necessary to send up with the piquet a reinforcement to enable it to overcome the opposition and to reach its position. Once it has reached its position, the reinforcement can be withdrawn.

Road Sentries.

Every piquet has two men detailed as road sentries It is a suitable job for unfit men. The road sentries may or may not be included in the rifle strength of the piquet. If the piquet is staying

up for more than a short time, the road sentries should accompany the piquet up. In this case, when the rearguard is seen approaching, the piquet commander sends them down to the route. Road sentries should stand either—

(*a*) At the place from where the piquet went up. In this case they must find out, by going to see, the best place from which the rearguard commander can give the permissive signal (explained later) ; or

(*b*) A short distance before the rearguard commander will reach the best position from which to give the permissive signal.

The second of the above alternatives is usually preferable since otherwise the rearguard commander will collect quite a tail of road sentries following along behind him until they reach the point for the permissive signal. The rearguard commander already has quite sufficient people round him without adding a number of pairs of road sentries to form a target for enemy fire. Further, if the piquet is being withdrawn forward (*i.e.*, not on the return march), it is clearly better for the road sentry to descend directly on to the point from which the permissive signal can best be given, having selected this point from the piquet position with the guidance of the piquet commander. His advice should then be of material help to the rearguard commander.

The road sentries stand on the same side of the route as that on which their piquet lies, with fixed bayonets. One of them has clipped under the backsight of his rifle the second (green) foil of the piqueting slip (facing p. 10). When the rearguard commander comes up to him, the sentry " recovers arms," presenting to the rearguard commander the slip, and points out to him the best point on the route from which to give the permissive signal.

Where to post Piquets.

The " Manual," Section 23, para. 1, states :—

" Piquets should be posted so as to deny to the enemy the most dangerous approaches and the most important points within effective range of the route, and to support one another."

Side nullahs entering the route and not covered by a piquet on a hill must therefore also be blocked by a piquet. Such nullahs offer to the enemy an excellent covered line of approach for a sudden knife attack on the long line of baggage animals, many of them loaded with S.A.A. worth even in peace time at least a shilling a round to the tribesmen.

Semaphore Signalling.

Every section commander and as many soldiers as possible must know semaphore, for communication from piquet to route and between piquets. It should not be forgotten that the enemy is likely to have in his numbers men who have served in our forces and know semaphore. Signalling must therefore be done from a place which is not in view of the enemy, if possible.

Piqueting Screen.

Each piquet carries a screen, usually about two feet square (platoon headquarters sometimes has a larger one), white on one side, khaki on the other, mounted on two spiked bamboos about a foot longer than the screen The method of the use of this screen varies in different brigades on the Frontier. In general it is shown on the route side of the piquet position or the summit of the hill occupied, if possible with the sun shining on the white side, and where it is clearly visible from the route. As the rear-guard commander passes the piquet the screen must be moved round the hill to keep it always in view of the rearguard. This is especially important when the piquet is on a hill on the inside of a bend. The screen simply shows that the hill is occupied by a piquet, but cannot show where the exact position of the men of the piquet is, as they are often not visible from the route.

In withdrawal the screen is carried by the last man to leave the piquet position, and it is waved by him as he runs down the hill. This is a signal to the troops giving covering fire that the hill above and behind the waving screen is clear of our own troops.

The screen is sometimes shown every few hundred yards for a few seconds by one of the leading men in the advance to the piquet position.

Company Support.

It is usual, unless the numbers available for piqueting are very short, to detail part of each company of piqueting troops as a company support. One or more light automatic sections can often be better used in this way than by sending them up as piquets. The company support, under the orders of the company commander, takes up a central position to cover the piquets found by the company, as well as the ground and distance permits. Later it assists to cover the withdrawal of the piquets, the stage at which the enemy is likely to be most active.

Company Commander.

Besides taking charge of the company support, the company commander should visit as many of his piquets as is possible.

When doing so he will, of course, leave the company support in charge of his second-in-command. He should also meet the rear-guard commander at the beginning of his company area, and advise him as to the position of the piquets found by his company, and the best means of withdrawing them.

Diary-Keeper.

The advanced guard commander's diary-keeper notes the number, strength and position of each piquet as it is sent up.

Discipline.

Silence is vital in all operations in the hills, where sound carries far and any shouting or blowing of whistles, or even talking, may disclose to the enemy the position or intentions of piquets. If the men are at all times silent when under arms, it is easy to train the non-commissioned officers to give their orders just sufficiently loud to be heard. Silence when pitching and striking camp, and at morning and evening stand-to, when camel-drivers and other followers are liable to talk, is imperative.

Effective Range.

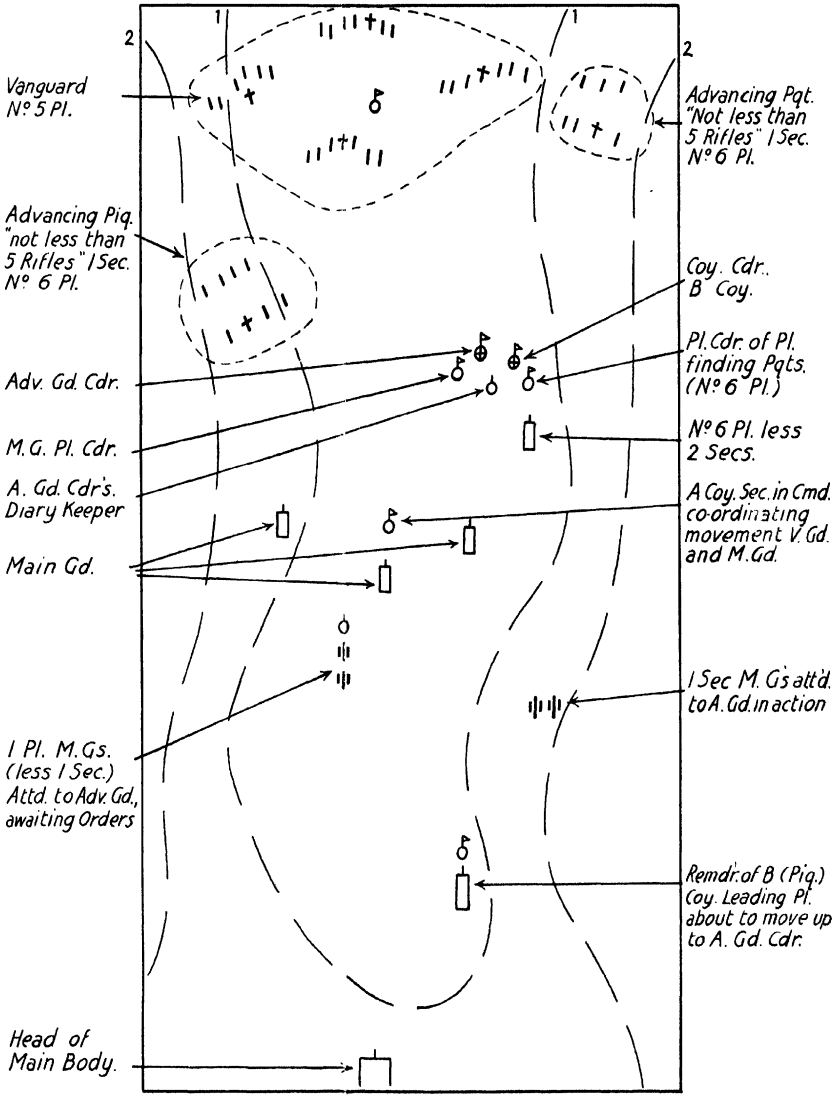
The tribesman is an ideal game shot. He has superb eyesight, far superior to most Europeans. He is very patient, and will wait hours for his chance, making every use of cover to protect himself and steady his rifle. On the other hand, he is apt to be careless as to care of arms, and has no routine overhaul of his weapon. Nevertheless he is likely at ranges of fifteen hundred to eighteen hundred yards to make even a single individual moving in the open feel very uncomfortable. This means that possible enemy positions overlooking the route up to these ranges must either be piqueted or be under the view and fire of a piquet, no easy undertaking unless the ground be favourable.

The Mule.

The tendency on the Frontier latterly has been to regard the mule as a check on mobility. A mule properly trained and skilfully led can carry its load almost anywhere a man can go without using his hands, and almost as fast. The mule-leader is seldom selected for his intelligence, and he must be given careful orders as to what he is to do—*i.e.*, to follow his platoon closely, or at a distance, or to remain with company headquarters. If he is to follow at a distance, it must be remembered what a prize a mule load of ammunition is to a tribesman. The mule must not be exposed unnecessarily, as if hit it may not be replaced for some considerable time, and the remount received is likely to be untrained to hill work, and may be vicious.

DIAGRAM

An Example of Light Piqueting
Advanced Guard — A Coy. with 1 Pl. M. Guns
Piqueting Troops — B Coy.



Notes. Not to scale. No Runners, Signallers, or animals shown.

SAND TABLE EXERCISE No. 1

THE ONE-SECTION PIQUET

(Model used : Sand Model No. 1)

[NOTE.—This exercise and No. 2 Sand Table Exercise have been kept as simple as possible in order to serve as an introduction to piqueting. For this reason no enemy appear.]

1. Object of the Exercise.

The object of this exercise is to train the section commander in his duties—

(*a*) From the moment his section is called out to go as a piquet, until—

(*b*) Such time as he is safely settled in his position and ready to hold it until recalled by the rearguard.

2. Introductory Notes.

Section 23, paragraph 2 of the " Manual " states that piquets " should always consist of complete sub-units, the advanced guard commander stating the **minimum** number of rifles required."

Every possible measure must be thought out and thoroughly practised to ensure that from the moment the advanced guard commander turns and calls for a piquet until such time as it is secure in its position there shall be no confusion whatsoever, and no avoidable delay.

The following is the procedure generally adopted. Minor details can, of course, be varied as the company commander thinks best.

1. The advanced guard commander turns and says : " No. 4 Piquet, right (or left), not less than one N.C.O., six rifles."

2. The company commander of the company finding the piquets on that part of the route details a section of not less than the number of rifles indicated from the platoon following close behind him.

3. The piquet doubles up, clears the route on the flank indicated, turns outwards, forms single rank, and loads under the orders of the section second-in-command one round in the chamber, four in the magazine ; safety-catch to the rear.

4. The section commander in the meantime has reported to the advanced guard commander.

5. The advanced guard commander sticks his " pointer staff " in the ground and aims the sight at the position he has selected for the piquet.

6. The section commander looks over the pointer staff ; each member of the piquet then does the same.

7. The advanced guard commander issues his orders to the piquet commander direct in the hearing of—

(*a*) The company and platoon commanders.

(*b*) The machine-gun section commander of the machine-gun platoon which is usually detailed to support the posting of piquets.

(*c*) The advanced guard commander's diary-keeper.

The advance of every piquet is in the nature of a small attack, and requires the same provisions.

8. The advanced guard commander's orders include :—

(*a*) The rôle of the piquet.

(*b*) Its number.

(*c*) The position of neighbouring piquets.

(*d*) Who is to give the piquet the " permissive signal " to withdraw, and in which direction it will withdraw.

(*e*) If, and from where it will be supported during its advance and after it has arrived.

(*f*) Orders for the road sentries.

The company commander then—

(*a*) Gives the piquet commander two parts of the piqueting slip (reproduced facing p. 10).

(*b*) Points out to him the best line of advance.

(*c*) Gives orders as to whether the road sentries are to go up with the piquet in the first instance, or to stay on the road.

(*d*) If the piquet is a Lewis gun section, gives orders as to whether the mule is to go with the piquet or, if not, where it is to go.

NOTE.—If the ground is very steep or broken, or there is serious risk of the mule being hit, it is usually best to keep it with company headquarters, under the care of the company havildar-major (company serjeant-major). It must on no account be left unprotected on the hillside between the route and the piquet. The ammunition, plus the mule leader's rifle, plus the mule will form an almost irresistible bait for the enemy.

OPENING SITUATION.—" A " Company forms the advanced guard. Capt. Quick, commanding " A " Company, is the advanced guard commander, and has reached the point marked **X** on the sand model. " B " Company is providing the piqueting troops. " B " Company commander is with the advanced guard commander. Five piquets have been sent up. No. 7 Platoon is " next for piquet," and is marching twenty yards in rear of the advanced guard commander. No. 7 Platoon commander is with " B " Company commander.

The vanguard is shown on the sketch, and should be shown on the model with halma men.

The advanced guard commander turns round to " B " Company commander and says : " No. 6 Piquet, right, not less than one N.C.O. and six rifles." " B " Company commander consults his statement of strength of sections, and says : " No. 10 Section." No. 7 Platoon commander calls up No. 10 Section, and says : " No. 6 Piquet, right." The section and section commander act as given above. The advanced guard commander points his pointer staff at the position marked **Y** on the sketch, and gives the following orders to the section commander while the men of the section are looking over the pointer staff and noting the position of the piquet.

" No. 6 Piquet, right. You can see No. 5 Piquet there (on the left), and No. 4 there (on the right). [These two piquets are off the model to the south.] No. 7 Piquet will be there (on the left). [Off model to the north.] ' B ' Company will provide covering fire. You will be withdrawn in about three hours by the rearguard as it passes north."

" B " Company commander then says : " Here is your slip. Your best line of advance is up that spur from the south. Your road sentries will go up with you, and stay up until you see the rearguard approaching. No. 12 Section will give covering fire from there (on the right)."

Problem No. 1.

What does No. 10 Section commander do now, preparatory to beginning his advance to **Y** ?

Answer.—No. 10 Section commander will give his orders to his men.

Problem No. 2.

As No. 10 Section commander, give out your orders.

Notes for Solution.—These orders should be given out by one of the squad under instruction, treating the others as his section. They must be brief ; one minute should suffice for giving them out.

SPECIMEN ORDERS.

" You are No. 6 Piquet. You know the position. No. 4 Piquet is there, No. 5 there, and No. 7 there. The rearguard will withdraw us in about three hours as it passes north.

" Ptes. Slow and Stop, you will be road sentries. You will come up with the piquet. Here is your part of the slip. No. 12 Section will give covering fire from a position about a hundred yards to our right, over there. Line of advance up the spur there." Formation . . . (see Problem 3 below).

Problem No. 3.

In what formation and at what pace will the piquet move ? Where will the piquet commander be ?

Notes for Solution.—It is usual for a piquet to move in two or three lines, preceded by scouts. A small piquet such as this will move in two lines. If suitable parallel spurs exist leading to the position, the leading line or lines will generally move up one, and the supporting line up the other. When the first line consists of not less than five it will normally be preceded by ground scouts. When the scouts reach a point some three or four hundred yards from the position they should take cover and allow the piquet to catch them up, and continue the advance with the leading line.

PACE.—On the order " Advance " the **rear** line moves off in quick time. The leading line or lines and the scouts get their distance by doubling, and then break into quick time. The distances between the scouts and the leading line, and the leading line and second line, depends entirely on the ground and cover. In places the frontier hills are thickly covered with scrub and small trees. This occurs mostly on the northern slopes. In such a place thirty yards, or even less, would be sufficient distance. In open ground with a small piquet such as this, one hundred yards might be enough. Flank men should watch their flank.

The piquet should not try to double even if the slope is easy. They must arrive at the position fit to shoot and use their bayonets. They should, however, step out at their best pace considering the gradient and surface.

The squad should place halma men on the model to show every man in the piquet. It is useful to have halma men with distinctively coloured heads to represent platoon and section commanders.

The leading line will be under the orders of the piquet second-in-command, and the piquet commander will be with the supporting line.

Problem No. 4.

In what way can the supporting line best help the leading line up to the position ?

Notes for Solution.—They should take up a good position for covering fire, if possible between two and four hundred yards of the position (suggested position marked **Z** on the sketch). Anticipatory fire orders must be given. The non-commissioned officers must search the ground unceasingly with their glasses. Every man must be ready to fire instantly on the first sign of enemy on the hill—sights set, safety catch forward, rifle in the shoulder, as for snap-shooting on the range.

NARRATIVE.—The leading line has now approached within about fifty yards of the summit. There is no sign of any enemy.

Problem No. 5.

What will be the formation of the leading line ?

Notes for Solution.—It will be in extended line. The flank men should work round the sides of the summit. Any tribesmen lying up on the hill are unlikely to stay if their " get away " is threatened.

PHASE 2.

ON ARRIVAL AT THE PIQUET POSITION.

NARRATIVE.—The leading line has now safely occupied the summit of the hill. Nothing has been seen of any enemy. The second line has advanced to the summit under command of the piquet commander.

Problem No. 6.

Place every man on the hill where you think he should be.

Notes for Solution.—The piquet second-in-command, in charge of the leading line, should have disposed his men in positions from which they can fire at any enemy making a sudden attack from dead ground close below the summit to the north and east, and on any enemy retiring.

NARRATIVE.—The piquet commander has reached the summit, has taken a quick look over the ground, and has been told by the second-in-command what he has done and seen.

Problem No. 7.

There are a number of things to be done. Give them in the order in which they should be done.

Solution.—1. Ensure that there is no avoidable movement on the sky-line and elsewhere.

2. Send two men forward, covered by the others, to search the dead ground below the cliff on the north-eastern side of the position.

3. Post two men on the east, and two on the north, and keep the rest in a central position, avoiding the skyline and **any old sangars which there may be.** The enemy are sure to have the range of these and to keep a close watch on them.

4. Put up the piqueting screen on the route side of the position where it can be seen from the route, and with the sun on its white side if possible.

5. Report occupation of the position to " B " Company commander by semaphore.

6. Reconnoitre a line of withdrawal to the north-west.

7. Prepare a defence range card, taking ranges by the average method.

8. Explain to the road sentries, who should be in the central position—

(*a*) Where they are to meet the rearguard commander.

(*b*) What you consider the best place for giving the permissive signal.

(*c*) The line of withdrawal you have decided on.

9. If it is possible without undue visible movement, conduct a small rehearsal of the withdrawal, detailing the order in which each man will withdraw, the fastest men downhill coming last with the screen, and waving it occasionally. They must also glance behind them as they run to make sure they are not being followed.

10. Establish communication by semaphore with neighbouring piquets.

Problem No. 8.

What are the piquet commander's final duties ?

Solution.—Constant vigilance of all ground to the south, east and north, and of all neighbouring piquets.

Supervision of his men to ensure that they keep silent, and constantly alert without moving about. (NOTE: If the piquet is to be in position for more than two hours or so, and if the enemy are not active, sentries should be detailed, and the remainder of the men can rest under cover.)

Keep a watch on the valley to see when the rearguard red flag approaches.

GENERAL NOTE.—To ensure that the teaching of this exercise is thoroughly understood, and to fix it in the memory of all, it is well to work it a second time on a different model. Sand Model No. 2 is suitable for this purpose. It is suggested that at the second time of working, the piquet should be a two-section piquet, " not less than two non-commissioned officers and twelve rifles."

It is the practice in some battalions not to count the two road sentries in the strength of a piquet ; in other words, the section or sections detailed must be not less than two rifles in excess of the numbers called for.

THE REARGUARD

(See Diagram)

In the diagram the rearguard is shown composed of two platoons. The rear party is commencing to withdraw through the main guard, which is in position. This is the " leap-frogging " system. The rearguard commander has with him the company commander of the company finding the piquets, and the platoon commander of the platoon of machine guns attached to the rearguard. The machine guns usually " leap-frog " by sections, one section always being in action.

The rearguard commander with the red flag has been met by the two pairs of road sentries shown close to him, has given the permissive signal to the two piquets, and is moving back while the piquets withdraw. The withdrawal of the piquets is covered by the section of machine guns in action and by such covering party as the company commander may be able to detail from his support or from piquets which have already joined him.

The detail for the withdrawal of a piquet is as follows :—

Withdrawing a Piquet.

When the piquet commander judges he will soon be getting the permissive signal, and providing the tactical situation at the piquet position permits of it, he sends away his covering party as unobtrusively as possible. This is composed of his slowest men under the second-in-command. They must crawl backwards over the skyline, keeping down that portion of their anatomy most likely to stick up, and then run their fastest. The road sentries have, of course, gone down as soon as the red flag came in sight. They meet the rearguard commander some fifty yards before he comes to the best place from which to give the permissive signal, or at the place from which the piquet went up (see page 12). They have fixed bayonets to ensure that the rearguard commander will recognize them as road sentries. One of them has the " second foil " of the piqueting slip clipped under the backsight of his rifle. As the rearguard commander approaches, he holds his rifle in front of him with the backsight towards the rearguard commander, who takes the slip. He points out to the rearguard commander the position of the piquet, and the best place from which to give the permissive signal. It should be noted that it is often impossible to see the piquet itself

from the position from which it is desired to give the signal. In such cases the piquet commander is responsible for sending or taking a portion of his piquet in good time to a place from which they can act as a transmitting station for the signal to the piquet.

The Permissive Signal.

The signal is called " permissive " because it is not possible for the rearguard commander to know the tactical situation at the piquet position. The piquet itself may be so closely pressed by the enemy that to make any move before the enemy have been driven back would court severe casualties, with consequent delay, and possibly loss of rifles. Or the piquet may, by staying for a short time, be able by covering fire to help another piquet to get away or to hold its position.

The signal means " come away as soon and as fast as you can." It relieves the piquet of all responsibility for protection of the route, or the column, or rearguard.

The rearguard commander should therefore not give the signal to a piquet until the tail of the column is in such a position that, if the enemy immediately occupy the vacated piquet position, the column is safe, and the rearguard able to protect itself.

The signal can be given by Morse if the piquet has a signaller, by semaphore, or by using the red flag. This latter method is the most general, but has the objection that if the enemy see it, they will undoubtedly understand it.

The method of signalling with the red flag is as follows :—

The piquet is called up by the non-commissioned officer in charge of the flag waving it over his head from side to side while facing the piquet. This is answered by the piquet with a similar signal. The non-commissioned officer then sends the number of the piquet, using the method for recording hits on the range :—The flag is held above the sender's head. Each dip of the flag to the right is one unit, and each dip to the left is a ten—*i.e.*, two dips to the left and three to the right would be 23. The piquet commander repeats the signal in acknowledgment. The red flag non-commissioned officer then gives the " wash-out " signal (waving the flag in front of him horizontal with the ground). This is also repeated by the piquet commander.

The piquet commander should then withdraw as soon as the tactical situation at the piquet position allows him to do so. There must not be a moment's delay on any other account, and the withdrawal must be at top speed, the fastest men being the

last to leave. They should come down like a handful of stones thrown down the hillside. If there is any delay after getting the signal, due either to enemy pressure before the withdrawal has begun, or to casualties coming down the hill, the piquet commander must let the rearguard commander know the reason.

Covering Fire.

The rearguard commander, or the piqueting troops company commander, or both, arrange to " cover the piquet down " with fire from artillery, machine guns, light automatics or rifles.

Piquet Reporting.

When the piquet arrives at rearguard headquarters, the piquet second-in-command gives orders to unload the round in the chamber. If the enemy is active it will usually be advisable to keep magazines charged. The piquet commander reports to the rearguard commander, hands in the first foil of the piqueting slip, and is given orders where to go. If the rearguard commander urgently requires a reserve he may retain piquets for this purpose as they come to his hand. Otherwise they should rejoin their unit with the main body. In a small column it may be necessary to send the same sections up on piquet two or more times during the course of the day's march. In this case they should be sent forward to rejoin the piqueting troops immediately in rear of the advanced guard as quickly as possible. In any event they should never be allowed to collect in the space between the tail of the main body and the rearguard, as this is likely to lead to confusion, or even to loss of touch. They should be sent forward in formed bodies of a platoon or more. (See " Manual," Sec. 25, 3.)

Co-ordinating Main Guard and Rear Party.

As the rearguard commander is likely to find himself fully occupied in—

(*a*) Signalling to piquets, and keeping the progress of their withdrawal under observation ;

(*b*) Arranging for covering fire for piquets withdrawing ;

(*c*) Controlling the movement of the red flag, and co-ordinating this with the movements of the main body, and the withdrawal of piquets ;

it is often convenient for him to appoint his second-in-command to control the movements of the main guard and rear party in relation to each other and to the red flag.

Diary-Keeper.

The rearguard commander has a diary-keeper, usually one of the Battalion Intelligence Section, or possibly a clerk, to keep a register of piquets withdrawing, showing—

(*a*) Number of the piquet, and on which flank ;
(*b*) Time when road sentries reported ;
(*c*) Time of giving permissive signal ;
(*d*) Time piquet reported " all present and correct," or otherwise, to the rearguard commander.
(*e*) Casualties.

Platoon Commander's Duties.

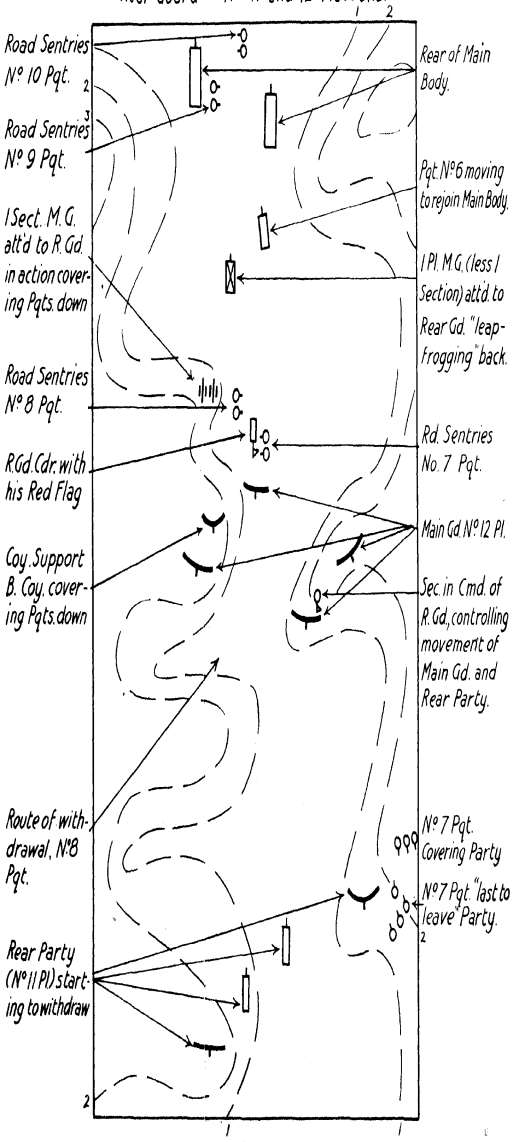
If the platoon commander has not himself been sent up to command a piquet, he will—

(*a*) Report to his company commander when he comes along with the rearguard commander the position and strength of the piquets from his platoon.
(*b*) Prepare to cover them down if he has any weapons left under his orders (*e.g.*, the light automatic section).
(*c*) Keep a close watch on the withdrawal of his piquets.
(*d*) Report when his platoon is complete, and ask for orders.

DIAGRAM

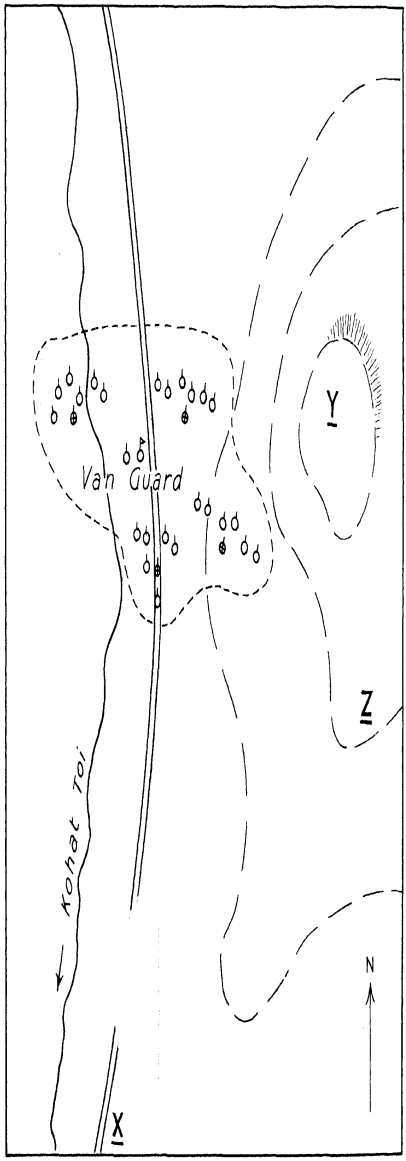
An Example of Withdrawing Piquets'

Rear Guard – Nos 11 and 12 Platoons.


1
2
Road Sentries No. 10 Pqt.
2
Road Sentries No. 9 Pqt.
3
1 Sect. M.G. att'd to R.Gd. in action covering Pqts. down
Road Sentries No. 8 Pqt.
R.Gd.Cdr. with his Red Flag
Coy. Support B. Coy. covering Pqts. down
Route of withdrawal, No. 8 Pqt.
Rear Party (No. 11 Pl) starting to withdraw
2
Rear of Main Body.
Pqt. No. 6 moving to rejoin Main Body.
1 Pl. M.G. (less 1 Section) att'd to Rear Gd. "leap-frogging" back.
Rd. Sentries No. 7 Pqt.
Main Gd. No. 12 Pl.
Sec. in Cmd. of R.Gd., controlling movement of Main Gd. and Rear Party.
No. 7 Pqt. Covering Party
No. 7 Pqt. "last to leave" Party.
2

Notes-Not to Scale. No Runners, Signallers or animals shown. Piquets from B Coy.

SAND MODEL No. 1



Scale

Yds. 0 100 200 300 400 Yds.

Vertical Interval 100 ft. = 4 Inches

SAND TABLE EXERCISE No. 2

(Model used—Sand Model No. 2)

THE ONE-SECTION PIQUET—WITHDRAWAL

OPENING SITUATION.—The opening situation is similar to the closing situation of Sand Table Exercise No. 1, but on a different model. It is summarized for convenience.

A column moving from south to north has put up piquets on both flanks. Hostile interference with the column is not expected, and the posting of piquets is precautionary only. The piquets, therefore, are small. The column is not returning the same day, and the piquets are therefore to be withdrawn by the rearguard as it passes north.

We are concerned now with No. 6 Piquet, right, strength one non-commissioned officer and seven men. No. 4 Piquet, right, and No. 5 Piquet, left, are off the model to the south. They will normally be withdrawn before No. 6 Piquet. No. 7 Piquet, left, is off the model to the north.

Problem No. 1.

When the piquet commander sees the rearguard red flag coming abreast of his position, what is the first thing he must do?

Answer.—Send down his road sentries to the route. (Halma men should be placed on the model to represent these two road sentries.)

Problem No. 2.

When the rearguard commander has received the piqueting slip from the road sentry, assuming that he decides to give the permissive signal with the red flag, how will he do this?

Notes for Solution.—One of the non-commissioned officers under instruction should act as the rearguard commander, and another as the piquet commander, and with a signalling flag give the signal as detailed on page 24. It is very important that this should be clearly understood and meticulously carried out. Nothing is more exasperating to a rearguard commander, pressed for time, and possibly pressed by the enemy, to be delayed by the inability to get any clear acknowledgment of his signals from a piquet, with the gap between himself and the column getting ever wider.

If the signal is not understood, the rearguard commander may find it impossible to get a piquet down without sending up a runner, or the wrong piquet may come down, and leave a gap in the defences which an active enemy will, in all probability, notice at once and take full advantage of.

Problem No. 3.

No enemy have been seen. What is the next thing the piquet commander must do after he has received the permissive signal, and acknowledged it ?

Notes for Solution.—The piquet commander should send away his second-in-command with two or three of his men (those who are the slowest downhill), with orders to take up a position from which to cover the withdrawal of the piquet. This covering position should be some three to six hundred yards from the summit, and in a place from which the summit should be, if possible, visible. Every man coming back over the skyline should do so on his stomach with his face towards the enemy in order to make every possible use of cover, and to avoid giving any indication to the enemy of the intention to withdraw. As soon as they are clear of the skyline they should turn and bolt at top speed, looking back occasionally to make sure they are not being followed.

The ability to run fast in full kit down a steep and rocky hillside is harder to acquire than the ability to go fast uphill. Nevertheless by practice it can be developed. All the Indian hill races can do so, and it is a wonderful sight to see them. British officers and men can seldom compete with them, but with training they can become as fast as the Indian races from the plains.

This first part of the piquet to come away, when it reaches its covering position, must make itself instantly ready to fire at the slightest movement of any enemy on the hill, rifle loaded and in the aim, with sights set and safety-catch forward.

The withdrawal of these men to their covering position should be shown on the model. If the tactical situation at the piquet position admits of it, this first part of the piquet to come away can be sent off by the piquet commander a few minutes before he expects to receive the permissive signal.

Problem No. 4.

When will the piquet commander come away with the remainder of the piquet ?

Notes for Solution.—He should do so as soon as possible after he gets the permissive signal. The only reason which admits of his delaying his withdrawal is enemy pressure on his own or a

neighbouring piquet. He may be unable to move without incurring heavy casualties, or he may have wounded men to get away, or by staying for a short time he may be able to help by his fire another piquet which is hard pressed. If he decides not to come away at once, he must inform the rearguard commander.

He should leave the position in the same manner as the first party. The last man to leave should bring the piqueting screen, waving it over his head occasionally as he runs to show to the machine guns and artillery in the valley that the summit of the hill is now clear. When the piquet commander with the last party comes abreast of the first party in their covering position, the latter should follow him at full speed. In some battalions it is the custom for the piquet commander to take command of this covering party when he reaches it, and to take charge of its withdrawal. This cannot, however, always be done, as the line of withdrawal chosen for the final party may very easily pass at some distance from the position of the covering party.

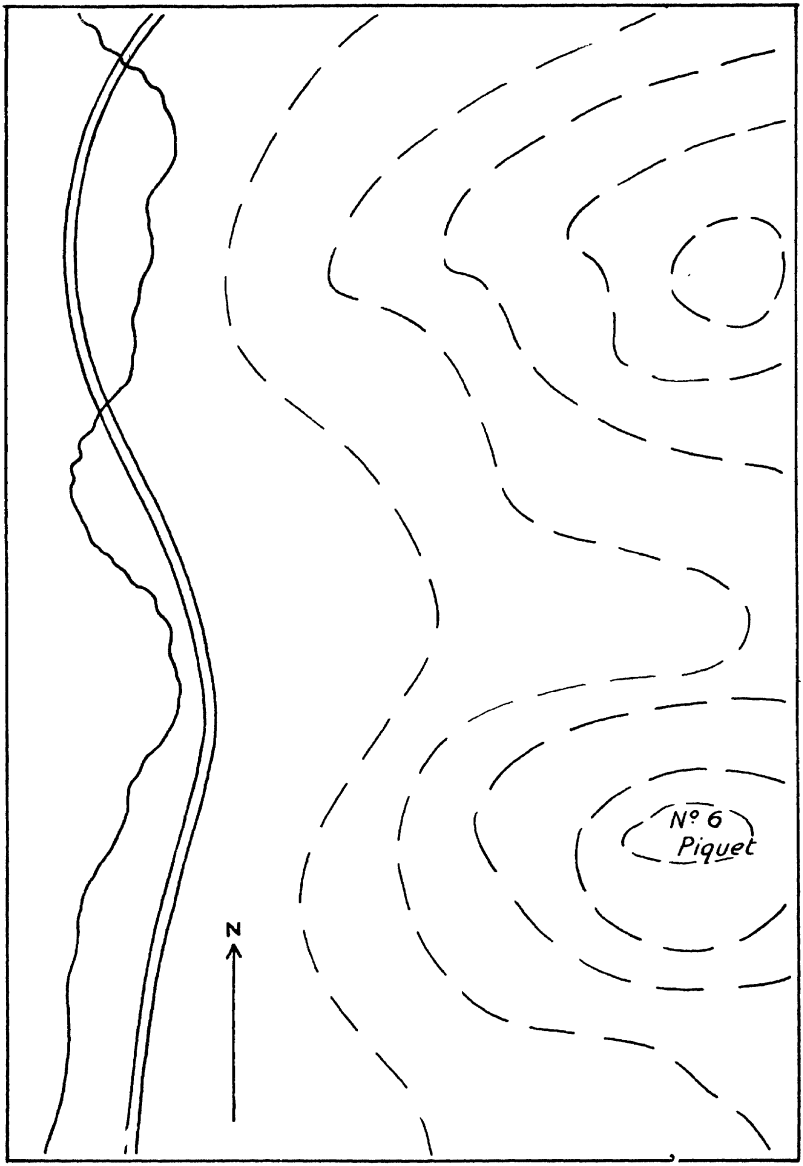
Problem No. 5.

On arrival of the piquet in the valley, what should they do ?

Answer.—The piquet commander reports the return of the piquet to the rearguard commander, hands over his portion of the piqueting slip, and receives orders what to do—*i.e.*, to remain with the rearguard as a reserve, or to rejoin his platoon and proceed with it to join the main body, or, if required again for piqueting, to join the advanced guard.

The piquet unloads, under orders of the piquet second-in-command.

SAND MODEL No. 2



SAND TABLE EXERCISE No. 3

THE TWO-SECTION PIQUET—PIQUETING OUT AND BACK

(Model used—Sand Model No. 3)

Object of the Exercise.

To give further practice in the drill of piqueting under varying conditions, and to study what is the best way of dealing with certain situations which may be forced on the piquet commander by the circumstances of the ground, and by enemy action.

OPENING SITUATION.—It is 0900 hrs. The column is marching from Camp LAKATIGGA to destroy DARSAMAND Village and return the same day to Camp LAKATIGGA. No. 2 Piquet (see sketch of model) has reached its position. The advanced guard commander, marching at the head of the main guard (" Manual," Sec. 21, 4), has just come in sight of EAST HILL and has called for No. 3 Piquet, strength not less than two non-commissioned officers and ten rifles, with two signallers, one light automatic and one mule.

(NOTE.—Halma men should be placed on the model to represent :

(*a*) The vanguard and head of main guard.
(*b*) The advanced guard commander and leading platoon of piqueting troops.
(*c*) No. 2 Piquet.)

As stated before, the advanced guard commander is usually provided with a detachment of battalion signallers, and will detail them to those piquets which he considers require them to maintain touch with the column and with other piquets along the route. This is especially important if piquets are to remain up all day. In such a case the advanced guard commander can so place his signal stations with piquets as to ensure constant communication with helio, lamp or flag from camp to the destination of the column. Thus if any piquet should see a party of enemy after the rearguard has passed them, they can inform the column commander speedily, and enable him to make arrangements in good time to deal with them on the march back.

The advanced guard commander gives the piquet commander the following orders :—

" You are No. 3 Piquet, left. You know your position (EAST HILL, pointed out previously by the pointer staff). No. 2 Piquet is there, and No. 4 there (off model to the east). You will remain up until withdrawn by the rearguard coming south down the nullah. Your advance will be covered by a section of machine guns."

The piquet commander receives his piqueting slip (first and second foils) from his company commander.

Problem No. 1.

What other orders will he expect to get from his company commander ?

Answer and Notes.—1. Advice as to the best line of advance for the piquet. In this case the line the company commander suggests is to advance straight up towards No. 2 Piquet until a point is reached three hundred feet below it, and then to move along the ridge. Thus cover is obtained from No. 2 Piquet, and the fire of the machine guns in the valley are not masked until the position is almost reached.

2. Whether road sentries are to go up with the piquet. In this case, as the piquet is to stay up some hours, the road sentries should go up with it.

3. What is to happen to the light automatic pack mule. The ground is easy. It can either go up with the piquet, and remain close below it, or be left in the valley with the company support. In this case the company commander says : " You will take your mule up with you."

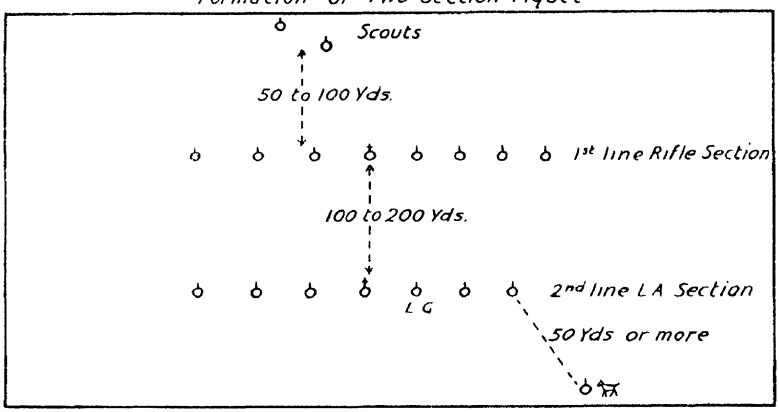
NARRATIVE.—The piquet commander has issued his orders on the lines of the solution to Problem No. 2 of Exercise No. 1.

Problem No. 2.

Show on the model with halma men the position of every man in the piquet, and of the mule, one minute after the piquet commander has given the order to advance.

Notes for Solution.—The formation should approximate to the following diagram :—

Formation of Two-Section Piquet



NOTES.—Extension not less than five yards.
Second line should not follow directly behind first line, but advance by a parallel spur, if one exists.
Mule follows at safe distance by easy and safe route.
Piquet Commander goes with supporting line, Second-in-Command with leading line.
Flank men watch flanks.
If Piqueting Screen is to be shown during the advance, the man carrying it should accompany Scouts.
Road Sentries in this case are with the piquet.

When the order to advance is given, the second line starts at quick time. The scouts and the first line get their distance by doubling, and then break into quick time, but should keep up their best pace up the hill.

Problem No. 3.

Show the position of every man in the piquet, and the mule, when the leading line is about one hundred yards from the position.

Notes for Solution.—The scouts should have halted some two hundred yards short of the summit, and allowed the leading line to close on them. The second line, light automatic section and signallers, led by the piquet commander, should have taken up a position for covering fire some three hundred yards from the summit—closer if a suitable position can be found.

PHASE 2.

NARRATIVE.—On reaching the position, the piquet commander finds a second hill (WEST HILL) two hundred yards north-west of the position indicated to him by the pointer staff of the advanced guard commander, and slightly higher.

Problem No. 4.

Should he occupy this farther hill ?

Notes for Solution.—The advanced guard commander, in spite of his map and experience, cannot tell from the valley the best position for the piquet, and therefore only points out the approximate position. The piquet commander must himself choose the best position on arrival at his objective. If he selects a position different from that indicated, he must report the fact without delay to his company commander.

The piquet commander must be trained to resist the urge to climb higher and higher in order to reach the top of the hill. If he has a reasonably strong position for his piquet, from which he can by his fire prevent the enemy occupying any ground within his area of responsibility whence they can fire on the column, there is no call for him to go beyond the position indicated to him. The farther the piquet goes, the harder it becomes to keep touch with the route and to withdraw. There is therefore good reason for the piquet remaining on EAST HILL.

NARRATIVE.—The small circle on EAST HILL is an old sangar (circular stone breastwork).

Problem No. 5.

Should the piquet commander detail any men to occupy this sangar ?

Notes for Solution.—Old sangars are known to the enemy, who have the range of them. They also form good aiming marks. They should **not** be occupied **by day.**

Problem.

What action should the piquet commander take with regard to WEST HILL ?

Notes for Solution.—He should certainly send his second-in-command, and four men, covered by the light automatic, to search the dead ground on the west side of WEST HILL. He may decide to establish a subsidiary piquet there. If so he must report this fact without delay to his company commander and to neighbouring piquets.

Problem No. 6.

If he establishes a subsidiary piquet on WEST HILL, where should he put his piqueting screen ?

Solution.—WEST HILL is visible from the route to the north-east. A piqueting screen should, therefore, be put up on both hills. Every section carries a screen, so this can be done.

Problem No. 7.

Point out the line of withdrawal which the piquet commander will reconnoitre as soon as he has made his dispositions for defence, and reported his occupation of the position.

Notes for Solution.—The direction of withdrawal will be towards the south-east. The piquet came up under cover of No. 2 Piquet, and had best withdraw the same way. Such a line of withdrawal is often the safest when piquets are situated on succeeding peaks rising from a long range of hills.

SAND TABLE EXERCISE No. 4

THE WITHDRAWAL OF A PIQUET CLOSELY FOLLOWED UP BY THE ENEMY

(Model used : Sand Model No. 3)

NARRATIVE.—Sand Table Exercise No. 3 is continued. The column passed on to DARSAMAND Village, some four miles distant, with only slight opposition from the enemy in the form of occasional long-range but fairly accurate sniping of the column and piquets. Piquet No. 3 has heard the sound of demolitions, and columns of smoke are seen rising from the direction of the village. About 1500 hrs. the advanced guard passes No. 3 Piquet on its return march, and considerable rifle and machine-gun fire can be heard getting closer. It is clear that the enemy, now thoroughly enraged, is endeavouring to do as much damage as he can to the troops.

About 1530 hrs. No. 3 Piquet commander sees the rearguard red flag approaching about half a mile to the north. The sniping at his position has increased and appears to be from nearer than before. One man has been shot through the shoulder. He can walk.

Problem No. 1.

Before withdrawing there are one or two things which No. 3 Piquet commander must do. What are they ?

Notes for Solution.—1. Send down his road sentries. They should await the rearguard commander abreast of EAST HILL, and be ready to point out to him the best place from which to give the permissive signal, and the position of the piquet.

2. Get his wounded man bandaged, if not already done. Take his ammunition and distribute it.

3. Send down his mule to the company support. The driver will carry the wounded man's rifle, and the wounded man will go with him.

4. Stealthily withdraw the subsidiary piquet on WEST HILL (if one has been put there) if the tactical situation permits of this being done unseen by the enemy. Otherwise it is probably best to leave this subsidiary piquet till the permissive signal has been received, and then to withdraw it as rapidly as possible under cover of the main piquet on EAST HILL.

If No. 3 Piquet was less closely engaged by the enemy, he should send away his light automatic to a covering position five or six hundred yards back **before** he gets the permissive signal. But as he is closely engaged, he is probably best advised to keep it until the last possible moment (see below).

NARRATIVE.—When the red flag came abreast of EAST HILL, the signallers with No. 3 Piquet got into touch with rearguard headquarters. Later they got the permissive signal by Morse by signalling flag. The piquet commander, who had previously carefully rehearsed his withdrawal, sent away his light automatic section to the covering position selected for it.

Problem No. 2.

Put halma men on the model to show the position from which the light automatic section will give covering fire to the piquet as it withdraws.

Notes for Solution.—A suitable position would be the north-east slopes of the hill some eight hundred yards south of EAST HILL.

Problem No. 3.

What orders should the piquet commander have given previously to the men remaining on EAST HILL, assuming that the subsidiary piquet on WEST HILL has been successfully withdrawn without casualties.

Notes for Solution.—They should have been extended to cover the frontage originally occupied by the piquet, and if the enemy have been visible and fire has been opened by the piquet, they must, when the light automatic section goes, increase the rate of fire so that the enemy do not get an indication that the withdrawal of the piquet has begun. When they get the order to leave the position, they will do so as laid down in Exercise No. 2, crawling backwards over the skyline, and then running at top speed, looking behind them occasionally to be sure they are not being followed.

PHASE 2.

NARRATIVE.—The last men to leave had only gone a hundred yards when a party of tribesmen raced round the west flank of the hill and opened fire. One of the piquet fell, shot through the leg.

Problem No. 4.

What should the piquet commander do ?

Notes for Solution.—The tribesmen must not be allowed to get either the man, his rifle or ammunition. There are two possible courses of action for the piquet commander. He must check the withdrawal, by use of his whistle if necessary, and then either—

(*a*) Counter-attack and regain his original position, taking the casualty, his rifle and ammunition with him ; or

(*b*) If cover is available, at once take up a position covering the casualty, and hold on until the enemy can be driven off by the fire of the piquet, and by covering fire of machine guns and guns from the valley.

As soon as it is possible, he must continue the withdrawal, bringing the casualty with him. There are three ways of carrying a dead or wounded man when no stretcher is available—

(*a*) The fireman's lift.

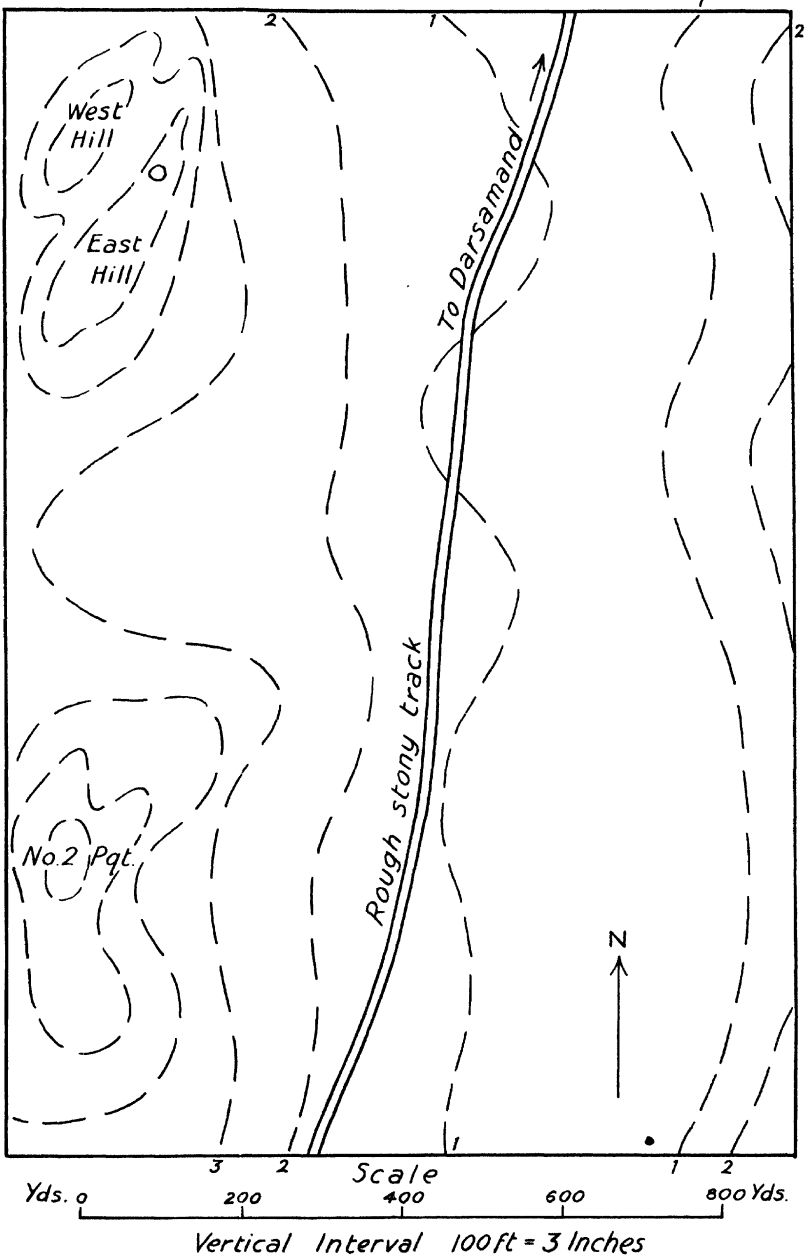
(*b*) By tying a puttee in a long loop, and placing one end of the loop under the man's armpits and the other behind his knees. The carrier then turns his back on the patient and slips his arms through the sides of the puttee. He can then hoist the casualty on to his back, pick-a-back fashion. This method has the advantage of leaving the carrier's hands free.

(*c*) By taking two men's coats and turning their sleeves inside out. The coats are then buttoned up, and two rifles passed through the arms. This makes a rough stretcher.

It is well to practise these methods, first on the parade ground and later on rough and steep ground. Much amusement can be obtained thereby !

The getting away of a badly wounded man entails much delay, and risk of incurring further casualties, and cannot be undertaken if the enemy has managed to establish himself within effective range until he has been driven off or his fire subdued. The piquet commander must arrange for someone to carry the rifles and equipment of the casualty and his carrier.

SAND MODEL No. 3



SAND TABLE EXERCISE No. 5

THE PLATOON PIQUET—THE HILL ON A BEND—RUSES

(Model used : Sand Model No. 4)

OPENING SITUATION.—The advanced guard commander, moving as usual at the head of the main guard, has just come on to the foot of the model, and has dispatched to the hill on the east side of the model, No. 7 Piquet, " not less than 24 rifles and one light automatic." A complete platoon, strength 1 officer, 1 serjeant, 27 other ranks, 2 signallers and one light automatic, has been detailed. They are being " covered up " by one section of machine guns, in position near the road at the south side of the model. The piquet is to be withdrawn to the north by the rear-guard when it passes in about three hours' time. Road sentries are to go up with the piquet. The company commander is not present, and consequently the piquet commander must choose the route for himself.

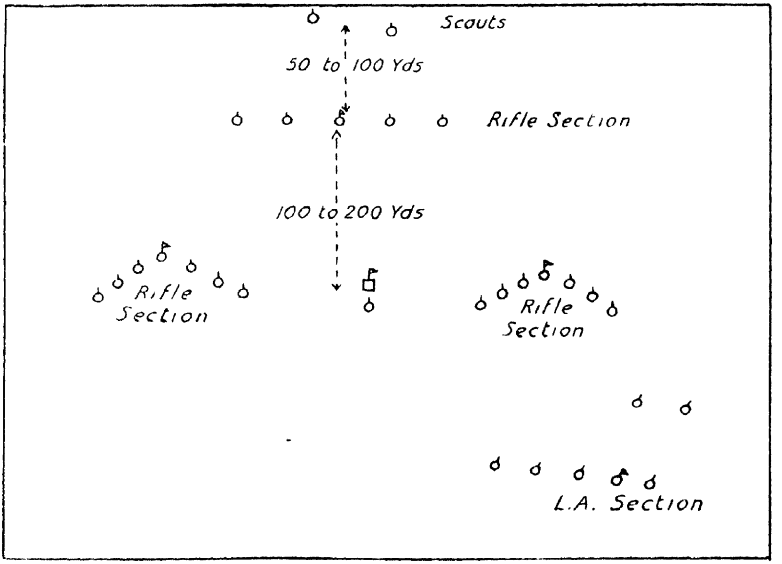
NOTE.—The class should be made to place the advanced guard on the model with halma men, strength two platoons.

Problem No. 1.

Place halma men on the model to show the formation of the piquet, and point out the route it will follow.

Notes for Solution.—Formation—see diagram below.

Formation of Platoon Piquet



NOTES.—Extension not less than five yards.
Second line will advance by a different spur from the first line, if one exists
Light Automatic Section is moving off to a position for covering fire.

The route must avoid the re-entrant and stick to the spur running up the hill on the south-west.

Problem No. 2.

In what formation should the piquet be as it nears the summit ?

Notes for Solution.—The light automatic section should have taken up a position for covering fire. When the leading section nears the summit, the two flank sections should come up on either flank of it, and the whole piquet, less the light automatic section, should approach the summit in an extended line with the flanks pushed well round the flanks of the hill to envelop it. Any enemy on the hill are unlikely to remain if their line of retreat is threatened.

NARRATIVE.—The hill is occupied without opposition, dead ground near the top has been searched, and arrangements for defence completed. The piquet commander starts to reconnoitre his line of withdrawal.

Problem No. 3.

In which direction will the withdrawal be carried out ?

Notes for Solution.—Towards the north as the column is passing through in that direction.

Problem No. 4.

When and to where should the road sentries be sent to meet the rearguard commander ? Give reasons.

Notes for Solution.—They should be sent either—

(*a*) To the point whence the piquet ascended, as soon as the rearguard flag is seen approaching ; or

(*b*) To a point north of the piquet position, in time to meet the rearguard red flag a hundred yards or so before the rearguard commander comes to the place selected by the road sentries as the best place from which the permissive signal is to be given.

REASONS :—

Alternative (*a*) above, reasons for :

(i) Gives the rearguard commander ample warning of the position of the piquet.

Reasons against :

(i) Deprives the piquet of two rifles at a time when they may be badly needed.

(ii) The rearguard commander does not want a " tail " of road sentries trailing along with him, and possibly drawing fire.

Alternative (*b*), reasons for :

(i) They must meet the rearguard commander when and where they are wanted by him.

(ii) The piquet have their services up to the last possible moment.

(iii) They can easily reconnoitre the best place from which the rearguard commander should give the permissive signal.

PHASE 2.

NARRATIVE.—During the time the column was passing, a body of some fifteen tribesmen, by skilful use of ground and cover, have managed to establish themselves among some rocks within about one hundred and fifty yards of the piquet, towards the east. All efforts to dislodge them by rifle fire have failed. The piquet commander realizes that it will be quite impossible for him to conceal from this party his preparations for withdrawal. He feels sure that the last party to leave the summit will be closely followed up and fired on at short range as they rush down the hill.

Problem No. 5.

There are several courses open to the piquet commander by which he can check the boldness of this party of the enemy. State them.

Notes for Solution.—He can arrange to—

(*a*) Withdraw his last party a hundred yards or so down the hill, and then take up a position ready to pick off the tribesmen as they come over the skyline ; or

(*b*) He can withdraw his last party, rather carelessly, for fifty yards or so, halt them under cover until the enemy comes over the summit, and then go at them with the bayonet ; or

(*c*) He can withdraw his last party carelessly fifty to one hundred yards down the hill, and then work round by the south-east to the east side of the hill. By the time he has done this, it is probable that the enemy will have established himself on the north and west sides of the hill. If so, the piquet commander can approach the enemy from behind and shoot or bayonet them while they are looking down the hill to fire on the retiring piquet and on the column ; or

(*d*) He can endeavour to dislodge the enemy with rifle grenades.

Any of the first three courses, if successful, is likely to give a severe check to the enemy, and may well result in the rest of the withdrawal being carried through without serious interference from the enemy.

If the piquet commander decides on one of the first three courses, he must inform the rearguard commander direct, or through his company commander, by a message sent by the hand of the road sentries, or by runner, and get his permission. To use a flag is slow for a lengthy message, and may be read by the enemy and " blow the gaff." Neighbouring piquets should also be informed. Whichever of the three alternatives is adopted, the subsequent withdrawal of the piquet will not be easy, and should have full covering fire from machine guns, and guns if available.

Problem No. 6.

Write out the message that should be sent, assuming that the piquet commander decides to adopt the alternative given at (*b*) on p. 25.

NOTES ON PERIMETER CAMPS

The " Manual," Sections 26 to 29, gives instructions in considerable detail for the construction and defence of perimeter camps.

The column commander will have informed the advanced guard commander where he wishes to camp, having chosen the site from information he has, from the map, or from aeroplane photographs. The site should provide—

(*a*) Easy defence, usually obtained by tucking the camp close in under a hill, and then piqueting this hill and other commanding heights up to a range of 1,000 to 1,500 yards.

(*b*) Ground on a gentle slope, not too rocky and not likely to be flooded.

(*c*) As good a water supply as possible.

(*d*) Fuel, unless this is carried.

(*e*) Freedom from malaria or other disease—*i.e.*, at least half a mile from any village or irrigated land, or standing water.

When the selected site is reached, the advanced guard commander is responsible for sending up piquets for its immediate protection. The column commander, when he arrives, will, after consulting the advanced guard commander, decide on the defences of the camp for the night.

The internal " lay out " of the camp is in the hands of the column commander's " Q " staff officer. He will fix the position of, and mark on the ground with flags or in some other clear way—

(*a*) The cross-roads through the camp.

(*b*) The exact area and boundaries of each unit.

(*c*) The line on which the outside line of tent-pegs of the tents around the perimeter will be driven.

The junction between one battalion, company or platoon should not come at one of the entrances or corners of the camp. Thus individual responsibility is assured at points of danger. The " Q " staff officer must know the minimum area required by every unit in the column, and what shape of area best suits their organization. It is vital that the camp be kept as compact as possible, otherwise a long, straggling perimeter will result, round which it will be impossible to build an adequate wall in the time available, and which it will be difficult to man in sufficient strength.

Cookhouses and latrines must be down wind of the camp and well apart. Night latrines must be inside the wire, close to the perimeter, and covered by a sentry.

Every unit and detachment in the column will send a camp colour party to the " Q " staff officer, usually at the beginning of the day's march. When he has decided on the limits of the area for each unit, he will have unit flags placed to show the exact trace. Outside the outer line of tent-pegs there should be—

(*a*) A road three yards wide.

(*b*) A support trench or wall.

(*c*) The fire trench or wall, or both.

(*d*) A ditch, possibly.

(*e*) A wire entanglement, if time permits.

The road, support trench and fire trench should normally be as close together as possible.

This system of defences should be as near the tents as possible, unless it is essential to advance the fire trench in order to get a clear field of fire. Some battalions arrange for every platoon to carry a light rope on which tags are tied to mark—

(*a*) The outer line of tent-pegs.

(*b*) The front side of the roadway.

(*c*) The front side of the support trench.

(*d*) The front side of the fire trench.

Unless some such system is adopted, there is likely to be confusion at the junction of companies and battalions.

To avoid fouling the camp area, the column should halt for five minutes short of the camp to allow men to fall out and animals to stale.

On arrival at the camp units are met by guides from the camp colour parties and led **outside** the perimeter to their front. They will halt facing outwards, outside their front, ground arms, and remove their equipment. No animals should enter the camp till dusk approaches.

It is an old custom, founded on long experience in Frontier battalions, that arms are never piled. The reasons are—

(*a*) In event of alarm, rifles can be taken much more quickly and easily from the ground than from a pile.

(*b*) A nicely dressed row of piles of arms is easily seen by the enemy, who, if he intends mischief, will put down a barrage of rifle fire on them.

NOTES ON SANGARING

Sufficient training and practice in entrenching or sangaring is seldom given in peace time, because—

(*a*) It takes much time, and is hard work ;

(*b*) Suitable ground is hard to find.

It is, however, worth remembering that in 1914, as well as in the Waziristan Campaign of 1920-1921, such training was found to be vital, enabling ground won to be held, and valuable lives to be saved.

" As has been noticed in former campaigns, the chief requirements for an efficient infantryman are physical and mental fitness, keen eyesight, supreme confidence in his rifle and bayonet, and ability to obtain cover quickly—*i.e.*, sangar making " (" Operations in Waziristan, 1919-1920," Chapter XII).

On the Frontier hills it is usually possible when lying in a fire position to push and pull a few stones together and thus obtain an appreciable amount of cover from view and fire. Well-trained infantry will do this automatically, as the Pathan does. Small stones are worse than useless, as they do not stop a bullet, but act as shrapnel.

Working parties must have a covering party, alarm post, and look-out and sentry over arms. The sangar should provide one yard of front per rifle. For small sangars, for one or two sections, a round trace is the easiest and quickest to lay out and build. A guide to the size is that the radius in feet should be equal to the strength in rifles. A wall in the shape of a cross should be built in the centre as a traverse. For larger piquets of twenty rifles or more, a trace fitted to the ground having characteristics similar to the diagram at the end of this section is best. A sentry post in each bastion can watch and shoot along every side.

In building a sangar or perimeter wall it must be decided beforehand what proportion of men are needed to gather stones, and what proportion as builders. Builders should work in pairs, one inside and one outside. If stones are ready to hand, about 75 per cent. of the men as carriers is right. If stones have to be sought for and carried any distance, about 90 per cent. carriers is necessary. Pack animals and army transport carts should be used to collect stones if possible. A chain of men passing stones from hand to hand is quickest if there are plenty of stones to hand. The smallest stone of any use is of the size of a man's head, and the larger the stones the better. Building is a highly skilled job, and men who understand it should be kept on it.

The wall to be built should be three feet six inches to four feet six inches thick at the ground, tapering to not less than two feet at the top. The height should be four feet six inches, which gives the maximum of cover while allowing a man of normal height to use his rifle with comfort and accuracy. Small men must build a fire-step for themselves. The outline of the top of the wall must be broken at intervals by large stones placed on it. These serve two purposes—

(*a*) Give head cover from oblique fire ;

(*b*) Make it difficult for an enemy sniper crawling near at night to pick out the sentry's head.

When building begins, that part of the wall which faces the direction of the enemy should be built first to its full height.

Wiring.

Screw pickets or angle irons should be used, and a double apron fence erected about twenty-five yards from the perimeter or piquet, and under observation and fire. If time and stores permit, a second fence should be erected five or ten yards from the wall.

NOTES ON PROTECTION OF ARMS

Various measures are possible for protection of arms by day. Tent poles can have a hole bored in them at the correct height to permit the passing of a light steel rod through the trigger guards of the rifles, and revolvers, with a padlock through one end. In any case every platoon should have a sentry over their arms. From dusk till daylight every man in camp and on piquet is responsible for his arms. He is given a rifle chain, a light chain with a ring at one end, and an oval loop at the other of such a size as to pass through the ring. The loop is passed through the swivel on the outer band of the rifle and through the ring. The ring end is looped through itself and the loop passes over the man's head and left shoulder. This gives the man full use of his rifle and bayonet. The rifle chain **must** be passed round the man's body. Automatic weapons must also be chained. A rifle thief is perfectly capable of disengaging the chain from the arm or wrist of a sleeping man if it can be disengaged without cutting. The man must sleep with his rifle tucked inside his blankets with him. Sentries will, of course, have four rounds in the magazine and one in the chamber, safety-catch to the rear. Men on guard and inlying piquets should have five rounds in the magazine and the cut-off closed. All other weapons in the camp, especially

revolvers and light automatics, must be unloaded. Men on duty (not on sentry) armed with the revolver should have five rounds only in it, the empty chamber being that " next for duty." One accidental pull on the trigger will not then discharge a round. The rifle chain on a revolver should not be through the trigger guard, but through the ring on the handle.

(NOTE.—The author was President of an inquest on a British soldier consequent on the neglect of the last two precautions above.)

NOTES ON CAMP DEFENCES

It is important that the weight should be on the springs of automatic weapons from dusk till daylight. This is a matter easily overlooked.

Company commanders themselves decide the minimum number of double sentries necessary on their section of the perimeter. It is usual to have one section per platoon on inlying piquet, which finds the sentries on the platoon's front. The sentry should have a string attached to the wrist of the section commander so that the latter can be aroused in absolute silence should the sentry see anything suspicious.

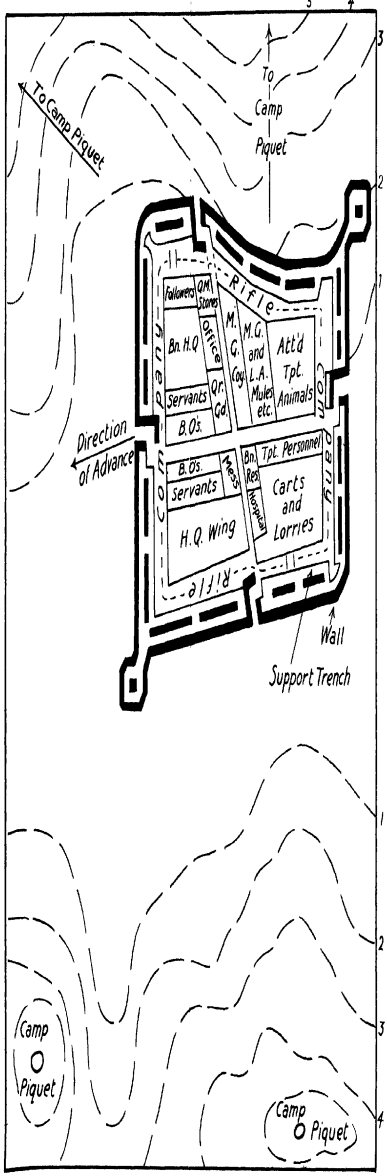
Men must be detailed in each tent to pull down the poles in the event of an alarm as soon as all have turned out.

If an attack is likely, or sniping heavy, the troops on the perimeter should sleep in the trenches.

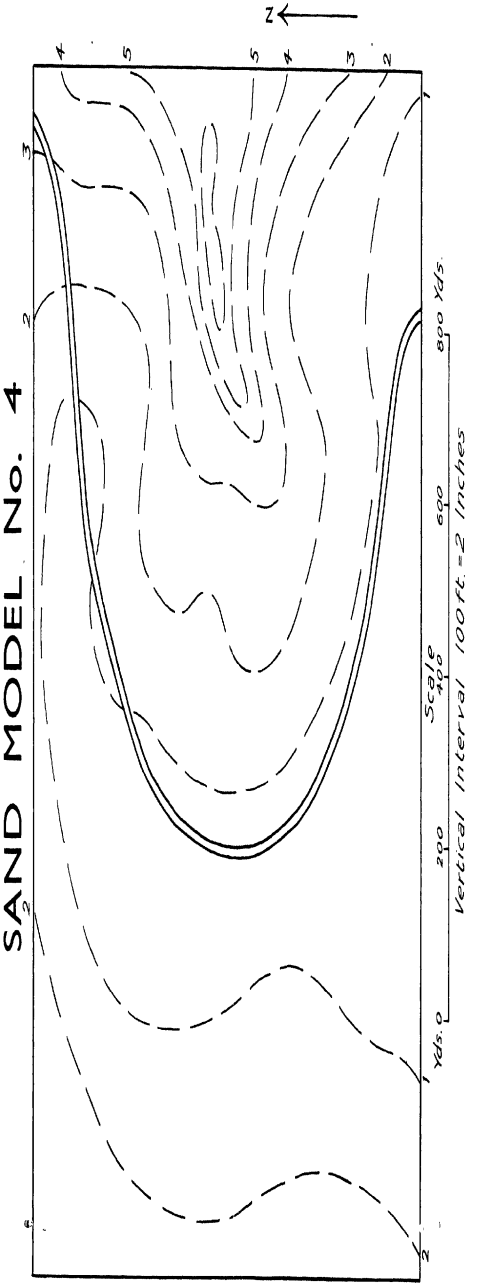
Dawn patrols within the piquet line are necessary to ensure that no tribesmen are lying up in cover near the camp.

DIAGRAM

Perimeter Camp for a Battalion with attached Transport.



SAND MODEL No. 4



SAND TABLE EXERCISE No. 6

HORIZONTAL CLOCK CODE

(Model used : Sand Model No. 5)

This method of fire direction and control when the firer is at a distance from the observer has been omitted from " Infantry Section Leading, 1934." It is, however, essential in Frontier warfare that every piquet commander should have a knowledge of it. During an advance or withdrawal it is not possible for the pack battery to keep an observation officer on the hill-tops. It follows that a target will frequently be visible only to a piquet commander, and he alone can indicate—

(*a*) The target, and

(*b*) The fall of shell,

by horizontal clock code by semaphore.

The method can very easily be taught and practised on the sand table. It is described in " Small Arms Training, 1931," Vol. I, Section 47, 5. And practice in it can be introduced very simply into any of the exercises in this book. In brigades on the Frontier it is regularly practised in conjunction with a pack battery when collective field firing is in progress.

1. Object of the Exercise.

To give instruction in the horizontal clock code, when used as a means of indicating targets to the artillery, and correcting the fall of shell.

2. Opening Situation.

As shown on the sand model sketch. Note the North Point.

No. 10 Piquet has just reached its position, and has observed a party of hostile tribesmen taking up a position on the spur at the west side of the model, intending apparently to oppose the advance of the column. The spur is covered with large rocks, giving the enemy excellent cover from rifle and machine-gun fire. The piquet's strength is one non-commissioned officer, eight rifles and two signallers.

As shown, there is a section of mountain artillery (3.75 howitzers) which has taken up a position at the northern corner of the model to support the advanced guard.

Problem No. 1.

What can the piquet commander do to drive the enemy from their position, and to warn the advanced guard of the threat to their advance ?

Notes for Solution.—The enemy have good cover. The range from piquet to enemy is about seven hundred yards, and the cover on the hill too good for the piquet to expect to be able to move the enemy from behind the rocks by rifle fire from the piquet position. The piquet commander should, therefore, waste no time in directing the fire of the section mountain battery on to the enemy.

Problem No. 2.

Write out the message which the piquet commander will give to his signallers.

Solution.—(See opposite page.)

POINTS TO NOTE.—Date and time of origin are unnecessary. North is twelve o'clock. On the North-West Frontier the Magnetic Variation is under 2 degrees east, so that for the purpose of the message True and Magnetic North are so close as to make no difference. The country lacks prominent objects which admit of easy description. The most convenient reference point, therefore, is the piquet position. The clock hour is given in words, the range in figures. " Down 300 " means that the target is judged to be three hundred feet below the reference point. This is important in hilly country. " Yards " and " feet " are omitted for brevity. The reference point can be given at the beginning or end of the message, or can be left out if the battery and regiment have been working together and have come to the agreement that the piquet position—*i.e.*, the position of the signaller—is always to be the initial reference point.

NARRATIVE.—From the piquet the section of artillery can be seen preparing to fire. The first shell is heard going on its way, the noise of the gun and shell burst is heard. Nothing is seen.

Problem No. 3.

What message will the piquet commander give to his signallers ?

Solution.—" U O," meaning " unobserved."

POINTS TO NOTE.—No address to or from is given. Communication has been established, and the message can be cut down to the bare words necessary. The artillery section commander will realize that the shell has in all probability passed over

(183366) Wt. W367/1622—250m pads—6/32. W. & S. Ld. E.3516

ARMY FORM 0.2128. (Pads of 100)

MESSAGE FORM.

DATE STAMP

CALL — IN / OUT

Serial No.

No. of Groups

GR

PREFIX AND INSTRUCTIONS

(ABOVE THIS LINE IS FOR SIGNALS USE ONLY)

TO 3 MTN BTY

FROM 10 PIQ

Originator's Number	Date	In Reply to Number
K I		

ref	pt	my	position	twenty
enemy	eight	oclock	1200	down
300				

TIME OF ORIGIN

DEGREE OF PRIORITY AND INSTRUCTIONS BY ORIGINATOR

THIS MESSAGE MUST NOT BE SENT BY WIRELESS BUT BY SOME OTHER METHOD.

IF SENT BY WIRELESS, THIS MESSAGE MUST BE IN CIPHER, IF BY SOME OTHER METHOD IT MAY BE SENT AS WRITTEN.

THIS MESSAGE MAY BE SENT AS WRITTEN BY ANY METHOD.

SIGNATURE *

SIGNATURE *

SIGNATURE * (Sgd) John Smith L/C.

* ORIGINATOR MUST SIGN IN THE APPROPRIATE SPACE.

(BELOW THIS LINE IS FOR SIGNALS USE ONLY)

T.H.I.	SYSTEM IN.	TIME IN.	READER.	SYSTEM OUT.	TIME OUT.	SENDER.

a crest and fallen in the valley behind, and been invisible to the piquet. He will fire another round with reduced or increased range.

NARRATIVE.—A second shell is fired and is seen to burst at **A** on the sketch. (NOTE : It can be represented by a piece of cotton-wool placed on the model for a second or two—as long as the smoke of the burst would hang.)

Problem No. 4.

Write the message the piquet commander will give to his signallers.

Solution.—" Five o'clock 300."

POINTS TO NOTE.—The target now becomes the centre of the clock, and north remains, as always, twelve o'clock.

NARRATIVE.—The next round is heard to strike, but no burst is heard or smoke seen.

Problem No. 5.

Give the message the piquet commander will send.

Solution.—" DUD."

POINTS TO NOTE.—It is incorrect to send " U O." The shell may have fallen on the target. If " U O " is sent, the artillery officer will think the round has fallen in a nullah short of or beyond the target, and will alter his range. If " DUD " is sent, the artillery officer will usually fire another round with the same line and elevation in the hope that the burst of it may be seen.

NARRATIVE.—The battery fires another round, and the burst is seen on the crest of the ridge, at **B** on the sketch.

Problem No. 6.

Give the piquet commander's message.

Solution.—" Eleven o'clock 50."

NARRATIVE.—The next round bursts among the tribesmen. It causes some movement.

Problem No. 7.

Give the message the piquet commander will send.

Solution.—" O K."

NARRATIVE.—The section of artillery fires five shells, most of which appear to burst where the tribesmen are. Sixteen tribesmen are seen to run away to the west, pursued by the fire of the piquet.

Problem No. 8.

What will the piquet commander do now ?

Solution.—At once send a message " STOP."

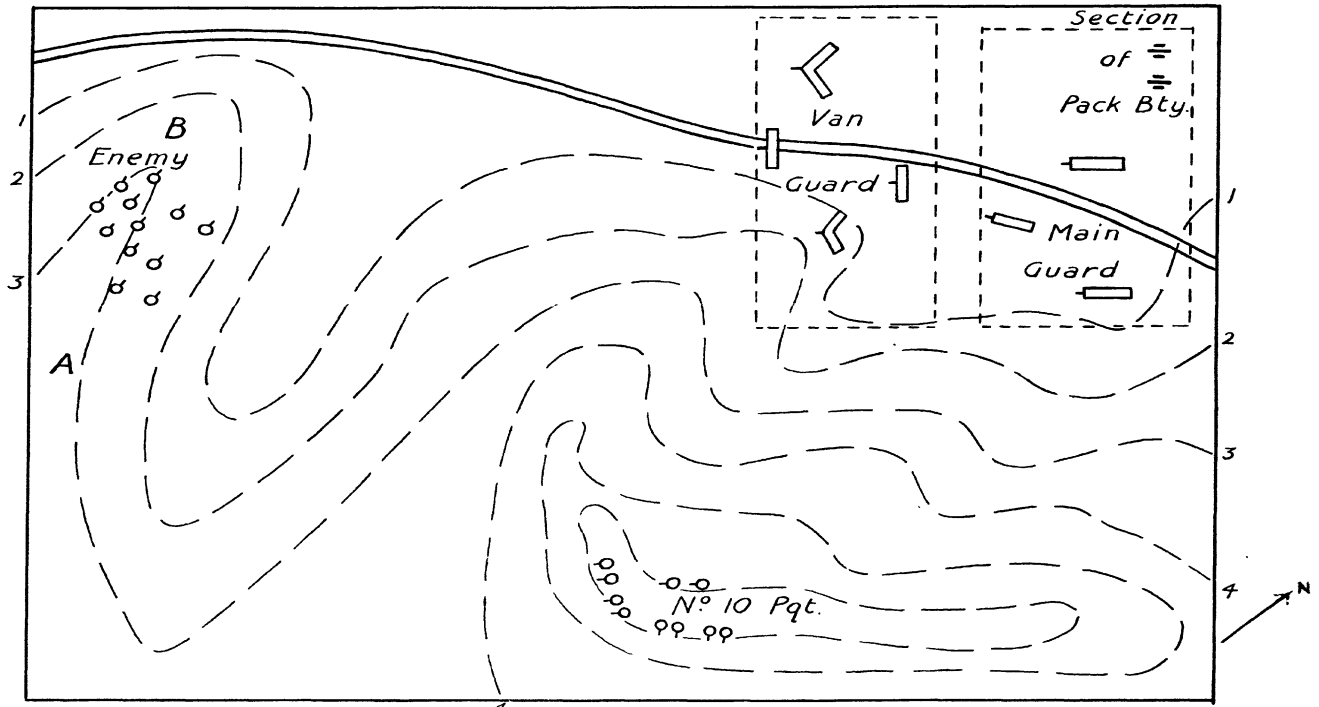
POINTS TO NOTE.—Ammunition is precious. As soon as the enemy has been driven off the hill, the fire must be stopped without delay.

General Notes.

At first it is best to lay on the model a clock face cut out of cardboard about six inches in diameter. For the first round the centre of the clock is on the reference point, for subsequent rounds on the target.

When practising horizontal clock code on different models, it is well to vary the direction of the North Point so as to be sure that all remember to turn the clock with twelve o'clock to the north.

SAND MODEL No. 5



SAND TABLE EXERCISE No. 7

THE ADVANCED GUARD

(Sand Model used : Sand Model No. 6)

OBJECT.—The object of this exercise is to teach the handling of an advanced guard in difficult country against an active enemy.

OPENING SITUATION.—The opening situation is as shown on the sketch. Advanced guard, two platoons "A" Company and one platoon machine guns, under command of Major Koihai. Vanguard, No. 1 Platoon, under command of Jemadar Tamasha. Subadar Jaldi Khan has been ordered to co-ordinate the movement of the vanguard and main guard.

(NOTE : In the Indian Army (except in Indianized battalions) a platoon is commanded by a jemadar or subadar. The jemadar wears one star, the subadar two stars. They hold Viceroy's commissions.)

Major Koihai has just made a halt and sent off three piquets, No. 7 to the right, and Nos. 6 and 8 to the left. One section of machine guns is in action on RAZOR SPUR to cover the advance of the vanguard into the dangerous defile ahead. The other section of machine guns has just come forward from their last position, and is marching one hundred yards in rear of the advanced guard commander, awaiting orders. The machine-gun platoon commander is with the advanced guard commander.

Problem No. 1.

Do you think that Major Koihai was wise in ordering Subadar Jaldi Khan to co-ordinate the movement of the vanguard and main guard.

Notes for Solution.—The answer to this really depends on the ability of Subadar Jaldi Khan. If he is an experienced and capable Indian officer, as he should be, he will be perfectly competent to " run " the two platoons. If Major Koihai can rely on the subadar's eye for ground, it will be of great help to him by allowing him to devote his whole attention to the posting of piquets. Major Koihai has also the machine-gun platoon to use to cover both the piquets ascending, and the vanguard where necessary.

Problem No. 2.

The vanguard has just come in sight of BEN NEVIS. There is no sign of the enemy. What line of advance should the vanguard commander, Jemadar Tamasha, give to the two leading sections ?

Notes on Solution.—BEACHY HEAD and THE CRAGS look very dangerous, a splendid position for an ambush. If the jemadar knows his job he will give this place as wide a berth as possible. He should move round the east side of BEN NEVIS, with his left section moving over the top of BEN NEVIS.

To move the whole vanguard round the west side of BEN NEVIS would, it is considered, be exposing it without any compensating advantage either in time or in the opportunity of inflicting casualties on the enemy should he show up. To move one section only round the west side of BEN NEVIS would be even worse. Should any tribesmen be lying up in the vicinity of CRAGS, a sudden volley would incapacitate the section, and be followed by a knife rush from the north end of CRAGS, a rapid snatching of rifles and ammunition, and a safe "get away" round the north end of BEACHY HEAD. The main guard could in all probability do little to help, and might very likely also find itself under heavy fire. The machine guns on RAZOR SPUR might do the enemy some damage, but not much as the whole affair would be over in three to four minutes, and the targets difficult ones.

Should anyone under instruction use the west side of BEN NEVIS, it is suggested that the situation should be developed in the way given above.

It may be argued that by moving round the east side of BEN NEVIS Jemadar Tamasha is failing to protect the head of the main guard. Should there, however, be any enemy on BEACHY HEAD, owing to CRAGS they are fairly safe from attack from the valley, and the simplest way to eject them is by No. 8 piquet moving round their west flank as the vanguard moves round their east flank. The enemy will have little chance of an ambush, and will be forced to withdraw as their line of withdrawal is threatened.

NARRATIVE.—The vanguard has reached the east side of BEN NEVIS. The left flank section, a rifle section, took a line which brought them over BEN NEVIS. As they reached the top of BEN NEVIS they were met by a heavy and accurate fire from the direction of CRAGS. Two men were hit, and the section took cover behind the rocks, and returned the fire. The remaining sections of the vanguard got into action on the slopes east of

BEN NEVIS. At the same time No. 8 Piquet, which was making for the summit north-west of BEACHY HEAD, and had reached a point just west of BLACK ROCKS, was stopped by fire from BEACHY HEAD.

Subadar Jaldi Khan, who is at the head of the main guard, is at the north end of BANANA HILL. The main guard is also under long-range but accurate fire.

Major Koihai is in the valley about one hundred yards west of Subadar Jaldi Khan.

Problem No. 3.

What action should Subadar Jaldi Khan take ?

Notes for Solution.—Uppermost in Subadar Jaldi Khan's mind should be the determination to get on. If the light automatic section of No. 2 Platoon has not got into action on its own initiative, Subadar Jaldi Khan should order them to get into action. The best position for them is probably BANANA HILL. The range is fairly long, but not excessive. In the meantime, if Major Koihai has not joined him, he should inform him of what he can see of the enemy and what he intends to do. Then his best course of action is probably to take at least two rifle sections of the main guard and get forward to BEN NEVIS or to the slopes east of it. His next endeavour should be to get two sections into a fire position north-east of BEN NEVIS, from which they can threaten the enemy's line of withdrawal. This can probably be accomplished most easily and quickly by " leap-frogging " two sections of the main guard past the vanguard.

He should avoid crowding troops on to BEN NEVIS. In the hills it is easy to overcrowd a feature, and to do so invites casualties without any compensating advantage.

To endeavour to get No. 2 Platoon into action on BEN NEVIS or on the slopes east of it with a view to pushing No. 1 Platoon forward would lead to much movement under the close fire of the enemy on CRAGS, movement which can be avoided by " leap-frogging " the main guard, or part of it. After passing through No. 1 Platoon, No. 2 Platoon will, of course, become vanguard.

NARRATIVE.—The machine-gun section on RAZOR SPUR has opened fire on the enemy on BEACHY HEAD.

Problem No. 4.

What task do you think Major Koihai should give to the other section of machine guns which is with him ?

Notes on Solution.—It is suggested that he should get them into action quickly. The south end of BANANA HILL is probably

as good a position as any. Their task should be to enable No. 8 Piquet to reach its position. This is the only sure way to shift the enemy on BEACHY HEAD.

It will probably also be necessary for Major Koihai to send at least one platoon from the piqueting troops to reinforce No. 8 Piquet in order to help them to get to their position. Once this is accomplished, the reinforcement should rejoin the piqueting troops.

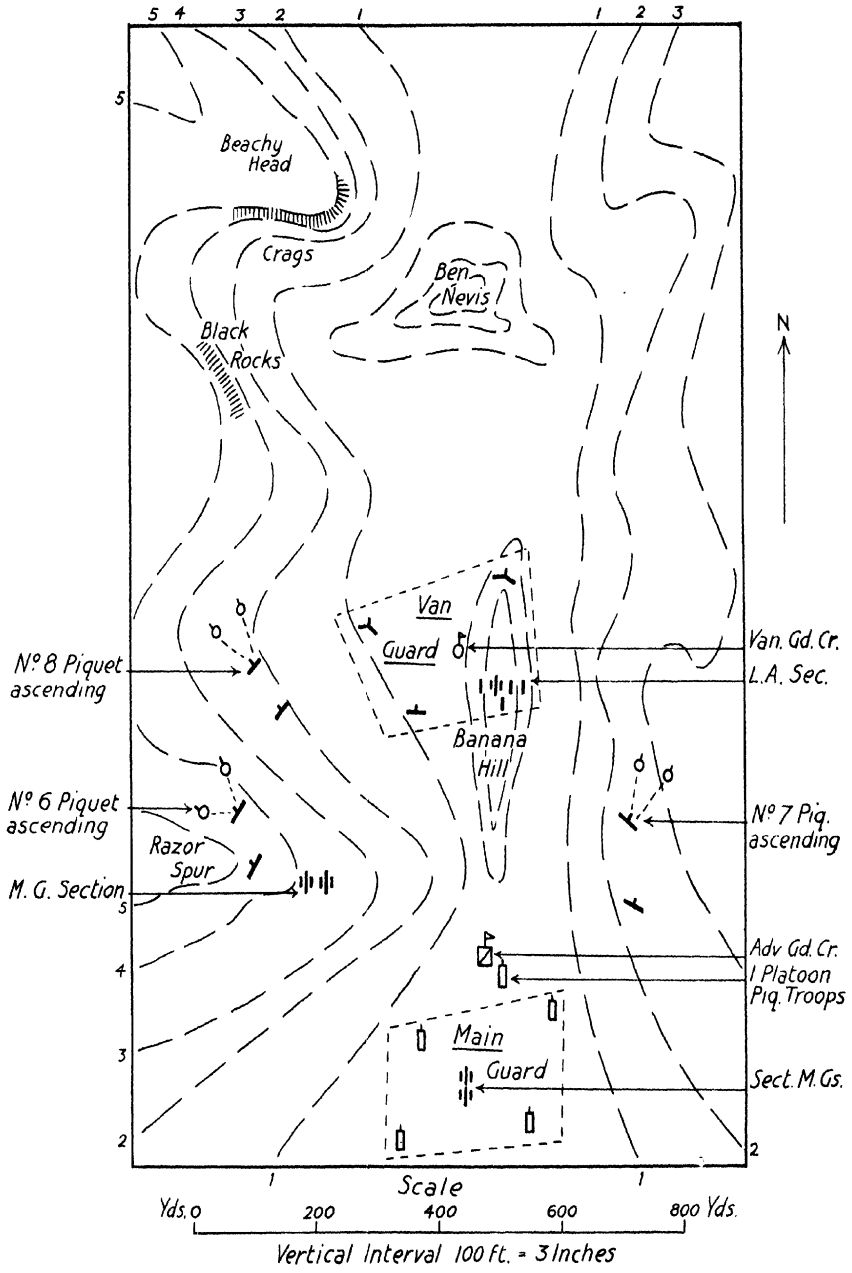
NOTE.—Problem No. 3 (page 57) admits of several solutions. Any suggested solution to be sound should provide for immediate action to shift the enemy from BEACHY HEAD and continue the advance. Should anyone suggest a frontal attack on BEACHY HEAD past the west end of CRAGS, it might well be approved provided it is supported by one or all of the following reasons :—

(*a*) That such a course will probably come as a surprise to the enemy.

(*b*) That it is quite possible that the enemy may be unable to fire at the foot of the hill below them without exposing themselves to fire from the machine guns, the advanced guard, and No. 8 Piquet.

(*c*) That the boldest course, provided it has a reasonable chance of success, is usually the best against tribesmen. There are numerous historical examples in support of this.

SAND MODEL No. 6



SAND TABLE EXERCISE No. 8

REARGUARD IN WITHDRAWAL

(Sand Model used : Sand Model No. 7)

OBJECT.—To teach the handling of a rearguard to a force withdrawing, followed up by an active enemy.

OPENING SITUATION.—A movable column encamped last night five miles south of SHALOZAN village with the intention of destroying the village on the following day. The column left camp at 0600 hrs., and reached SHALOZAN at 0830 hrs. Demolitions were complete at 1200 hrs., and the withdrawal was ordered to begin at 1215 hrs. The piquets put up during the advance were ordered to remain up. No. 12 Piquet is north of SHALOZAN, and No. 13 is north-west.

The inhabitants of SHALOZAN opposed the advance with vigour, and throughout the demolitions have been sniping the piquets. There is no doubt that the withdrawal will be closely followed up. It is, however, hoped that the two or three most advanced piquets may be able to slip away before the enemy discovers that the withdrawal has begun.

The composition of the rearguard is—

Commander : Major Stiff.
" B " Company.
" C " Company (less two platoons).
Two platoons machine guns (less one section).
Detachment battalion signallers.

NOTE.—If mountain artillery were available (and a column would not undertake such operations without them except of necessity), a section, or a battery, would almost certainly be with the rearguard. Their action would, however, be closely similar to that of machine guns. With a view, therefore, to keeping the scheme simple, and concentrating on the action of the rifle companies and the machine guns, artillery are omitted from the scheme.

As expected, Nos. 13, 12 and 11 Piquets were able to slip away before the enemy realized that the withdrawal had begun. No. 10 Piquet, however, covering such a long arm of the nullah, could not be got away till somewhat later.

The " Manual " says (Chapter VIII, Section 44, 4) : " All withdrawals must be conducted by bodies of troops in succession . . . at least two, and if possible more, lines should be selected

and occupied in advance " ; and Section 44, 1 : " To give really effective support to the infantry and to ensure that the withdrawal is carried out with the maximum rapidity, at least three echelons of guns or machine guns are required. They should move back by successive sections or subsections, some being always in action."

Problem No. 1.

As O.C. Rearguard, dispose on the model your troops to give effect to the above provisions.

Notes on Solution.—The rearguard is best divided into three echelons, each of two rifle platoons and one section of machine guns, each echelon commanded by the senior platoon commander. The two main requirements to be looked for in a position for one of the three echelons are :—

(*a*) As good a field of fire as is possible.
(*b*) A covered line of withdrawal.
(*c*) Sufficiently close to the position next in the direction of the enemy to be able to cover their withdrawal from the moment it begins.

The spurs and bends of the nullah will often provide these.

At the moment that No. 11 Piquet is given the permissive signal the rearmost echelon of the rearguard will probably be disposed with one platoon on the spur running east from FLATHEAD LEFT, and the other on the north slope of FLATHEAD RIGHT. The latter will be difficult to get away, and before the left platoon withdraws, the right platoon had better move back and occupy the spur running west from FLATHEAD RIGHT. The suggested position for the machine-gun section of this echelon is on FLATHEAD RIGHT. Echelon commander with the machine guns.

The next echelon might be disposed as follows :—One platoon on HOGS BACK, with possibly at first two sections on CAPE WRATH to fire into the re-entrant north of FLATHEAD RIGHT. One platoon on spur west of TOWER HILL. Section of machine guns on TOWER HILL or HOGS BACK. Echelon commander on TOWER HILL.

Section 44, 4 of the " Manual " says : " Usually the best place for the [rearguard] commander is with the first supporting line." He will order back by signal each echelon generally as soon as the next echelon is ready in position. " While collective movement must be fully controlled, individual movement must be as rapid as possible."

The third echelon will be moving back to take up a position south of the model. This position will be pointed out to the

echelon commander generally by the second-in-command of the rearguard. The commander of the echelon will hurry on ahead of his platoons to meet the rearguard second-in-command, reconnoitre the position pointed out to him, and have his plans for its occupation cut and dried before the echelon arrives.

Machine-gun sections should be ordered away a few minutes before the rifle platoons, in order to get their guns and ammunition on to their mules and the mules back out of view of the enemy before the platoons come away.

Problem No. 2.

When and from where should the rearguard commander give the permissive signal to No. 10 Piquet?

Notes on Solution.—As this is the beginning of the withdrawal, and there has been plenty of time to prepare for it (assuming that the troops detailed for the rearguard have been surplus to those required for protecting the demolition parties, collecting stores, wood, etc.), the three echelons will be in position in good time before the time fixed for the withdrawal to begin. At the beginning of the withdrawal the rearguard commander will probably be in the nullah between FLATHEAD RIGHT and HOGS BACK. It is vital that there should be no delay in No. 10 Piquet coming away. It will probably be best, therefore, first to give the permissive signal to No. 10 Piquet, and to follow it at once with a signal to the rear echelon to withdraw.

Problem No. 3.

By what route should No. 10 Piquet withdraw?

Notes on Solution.—There are normally two possible routes by which a piquet can withdraw:—

(*a*) Obliquely down the hill to the nullah, and then along the nullah.

(*b*) Towards the piquet next in rear, and under cover of it until close to it, and then obliquely down to the nullah.

In this case if No. 10 Piquet should endeavour to withdraw along the hills towards No. 8 Piquet they would have to swing west round the head of GLENCOE, and in so doing would expose themselves to an enemy on the west. If they withdraw south-east past the end of CAPE WRATH they may have an unpleasant time crossing the mouth of GLENCOE, but will soon be able to put CAPE WRATH between themselves and the enemy. The light automatic section, and possibly a rifle section, too, should get away first as covering party. There are two possible positions for the covering party—THE PIMPLE, and the north-eastern slopes of CAPE WRATH. The objection to THE PIMPLE is that it lacks a covered "get away."

PHASE II.

Problem No. 4.

When will No. 10 Piquet begin its withdrawal?

Notes on Solution.—The enemy being in the temper they are, are fairly sure to have worked round the western flank of No. 10 Piquet. Further, the hill having a flat top, it is improbable that the withdrawal can be begun without advertising the fact to the enemy. It is therefore clearly better to get this piquet away in good time, even at the risk of a few casualties in the rear echelon of the rearguard as it withdraws. Casualties in the nullah are much more easily got away than casualties on the hills, and are less likely to cause a delay in the withdrawal. Piquet No. 10 should therefore, it is suggested, come away level with the rear echelon of the rearguard.

NARRATIVE.—Piquet No. 10 has reached a point about fifty yards west of THE PIMPLE when two men are wounded by fire from the direction of the piquet position. At the same time the piquet finds itself under fire from the direction of the head of GLENCOE. There are a number of large rocks on the hillside.

Problem No. 5.

As commander of No. 10 Piquet, what will you do?

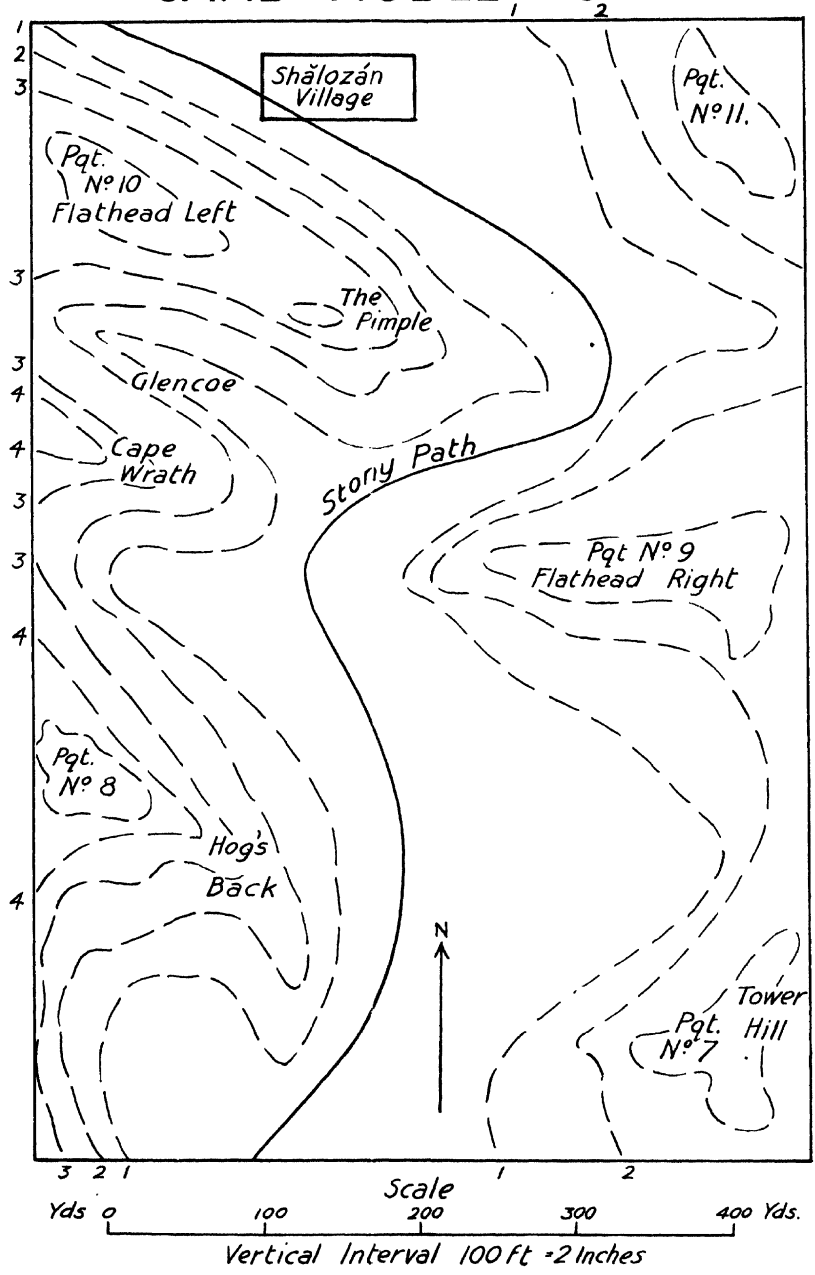
Notes on Solution.—The wounded and their rifles and ammunition must be got away. This cuts the speed of withdrawal of the piquet down to a walk, and makes an easy target for the enemy. As the enemy are clearly at the head of GLENCOE, to continue the withdrawal at a slow pace across the mouth of GLENCOE would almost certainly lead to further casualties, and possibly the loss of rifles. There are two possible other alternatives for the piquet commander—

(*a*) To counter-attack and regain the piquet position, leaving the wounded where they are behind the rocks with an escort.

(*b*) To hold on among the rocks where the piquet now is, and wait until the rearguard and piquets Nos. 8, 9 and 7 can by their fire subdue the fire of the enemy, and enable No. 10 Piquet to get away with its wounded without further molestation.

The first alternative entails an advance uphill in the face of an enemy with their " tails up," and is almost certain to mean further casualties. There is some cover among the rocks on the hillside where the piquet now is, and if the piquet shows a bold front, and the covering fire is accurate, the enemy are unlikely to venture towards the piquet either from the west or the north. The second alternative, therefore, seems the best.

SAND MODEL No. 7



QUESTIONS, WITH ANSWERS, SUITABLE FOR SECTION LEADERS' COURSES, AND NON-COMMISSIONED OFFICERS' PROMOTION EXAMINATIONS

(NOTE.—Most of these questions will be much more easily understood if described on a Sand Model.)

Easy Questions.

Q. 1. When a hill piquet is called for, and loads, should there be a round in the chamber, and why ?

A. 1. Yes. Because once the piquet leaves the protection of the column and advances towards the position, it is liable to meet the enemy at any time and must be ready to fire instantly. There is also none of our own troops in front of the piquet who could be injured if one of the piquet should stumble and discharge his rifle accidentally.

Q. 2. The piquet position is indicated by a " pointer staff " aimed at it. Who in the piquet should look over the " pointer staff " ?

A. 2. Every man in the piquet should look over the " pointer staff " so that everyone knows the objective, and can go to it, even if the piquet commander is hit.

Q. 3. In addition to its number, strength and objective, what other information does the piquet commander expect to get from the advanced guard commander ?

A. 3.—

(i) The position of neighbouring piquets.

(ii) The direction in which the piquet is to withdraw, and from whom it will receive the signal to do so.

(iii) Arrangements for supporting fire, if any, from guns and machine guns during the advance of the piquet from the route to its objective.

Q. 4. The piquet commander is given two parts of the piqueting slip by his company commander. What does he do with each part ?

A. 4. He gives one part to the road sentries and keeps the other himself.

Q. 5. What does the road sentry do with his part of the piqueting slip ?

A. 5. He clips it under the leaf of the backsight of his rifle.

Q. 6. Does the piquet commander expect to get any advice as to his best line of advance, and if so from whom ?

A. 6. Yes, from his company commander.

Q. 7. What other order does the piquet commander expect to get from his company commander ?

A. 7.

(i) Whether the road sentries are to go up with the piquet, or not.

(ii) If there is a light automatic in the section, what is to happen to the mule which carries it.

(iii) Arrangement for covering fire within the company during the advance of the piquet to its position, and for the support of the piquet after its arrival in its position.

Q. 8. In what formation should a piquet of " not less than one N.C.O. and six rifles " advance ?

A. 8. In two lines.

Q. 9. What is the duty of the second line ?

A. 9. To give covering fire to the first line should the enemy try to prevent it reaching its position.

Q. 10. At what pace will the piquet advance ?

A. 10. In quick time.

Q. 11. Does the supporting line wait until the leading line has got its distance in front ?

A. 11. No. The leading line doubles out until it has got its distance in front, and then breaks into quick time.

Q. 12. When the leading line consists of, say, six rifles, will it send two of its number ahead as scouts ?

A. 12. As a rule, yes.

Q. 13. Do not scouts tend to mask the fire of the remainder of the leading line ?

A. 13. Before the piquet reaches ground where it is likely to be fired on, the scouts should halt and wait for the leading line to catch them up. They should do so always two or three hundred yards from the position.

Q. 14. With which line will the piquet commander move ?

A. 14. With the supporting line, as a rule.

Q. 15. Should the piquet fix bayonets, and if so, why ?

A. 15. Yes, there is almost always cover for an ambush, and as the tribesmen are usually bent on stealing rifles and ammunition, the piquet must always be on its guard for a knife rush.

Q. 16. How does the leading line act as it reaches the summit of the hill (presuming that its position is on the summit, as it often is) ?

A. 16. The flank men work round the sides of the summit. This threatens the " get away " of any tribesmen lying up on or near the top of the hill, and is likely to make them clear off.

Q. 17. If the piquet is held up by enemy action, what should it do ?

A. 17. Take up the best position available, make all possible use of cover, and keep the enemy under fire until he is caused to withdraw either by—

(i) The piquet's own fire ;

(ii) Covering fire of rifles, machine guns, and guns from the advanced guard.

(iii) A reinforcement sent up by the company commander or advanced guard commander to help the piquet up to its position.

Q. 18. How does the supporting line of the piquet act ?

A. 18. It advances in rear of the leading line, or up a parallel spur if there is one, until it reaches a suitable position for covering fire, preferably within three hundred yards of the position.

Q. 19. How does the supporting line act when it reaches its supporting position ?

A. 19. It prepares to open fire instantly on the ground in front of the leading line should there be a sign of any enemy. The N.C.O. must give anticipatory fire orders, sights must be set, safety catches forward, rifles in the aim, and eyes ceaselessly scanning the ground. The N.C.O. must search every inch of the ground with his glasses.

Q. 20. On arrival at the piquet position, the piquet commander has a number of things to do. Say what they are.

A. 20.

(i) Dispose his men in the best way to hold the position.

(ii) Send men forward under cover of the rifles of the remainder to search any dead ground in the vicinity.

(iii) Put up the piqueting screen.

(iv) Report his arrival to his company commander by semaphore.

(v) Reconnoitre his line of withdrawal, and if possible rehearse the withdrawal.

(vi) Make a defence range card.

(vii) Explain to the road sentries—

(*a*) Where they are to meet the rearguard commander.

(*b*) What he considers the best place from which the "permissive signal" should be given.

(*c*) The line of withdrawal on which he has decided.

(viii) Get into touch by semaphore with neighbouring piquets.

Q. 21. Describe how the piqueting screen is used.

(i) During the advance of the piquet to its position ;

(ii) While the piquet is in its position ;

(iii) During the withdrawal.

A. 21. The screen is used—

(i) During the advance, in some brigades only, the screen is displayed by one of the leading line above his head for a few seconds at a time every hundred yards during the advance, to show how far the leading line has got.

(ii) While the piquet is in its position, the screen is put up on the hill, near the piquet position, in a place from which it will be clearly seen from the route, and with the sun shining on its white side, if possible. As the rearguard red flag draws level with and moves past the hill, the screen should be moved round so as to remain in sight of the rearguard commander.

(iii) During the withdrawal the screen is carried by one of the "last away" party, and is waved by him occasionally over his head as he runs down the hill. This is a signal that the ground in rear of the screen is clear of our troops, and can be fired on by our machine guns and guns, if necessary.

Q. 22. Provided a piquet is not hard pressed by the enemy, what should the piquet commander do when he sees the rearguard red flag approaching ?

A. 22. Send part of his piquet, the slowest men, and the light automatic if there is one with the piquet, down towards the route to a suitable position from which to give covering fire when the rest of the piquet withdraws.

Q. 23. Why is it best not to pile arms on the Frontier ?

A. 23. Piles of arms are visible for a long way, and make a good aiming mark. Each individual cannot get his own rifle so quickly from a pile as he can from the ground.

Q. 24. If a piquet finds an old sangar in its position, should they occupy it by day ? Give reasons.

A. 24. No. It forms a good aiming mark. The enemy will certainly have the range of it, and will watch it.

Q. 25. How should your rifle be chained to you at night ?

A. 25. The chain goes through the sling swivel at the outer band, and round your body, over the left shoulder and under the right arm.

More Advanced Questions.

Q. 26. The advanced guard commander when calling for a piquet from the piqueting troops should always give the size of the piquet in the words, " Not less than — N.C.Os. and — rifles." Why is this ?

A. 26. So that the company commander can detail one or more complete sections of not less than the required strength, and avoid breaking up sections.

Q. 27. In addition to the piquet commander, who else should hear the orders of the advanced guard commander to the piquet commander ?

A. 27. The company and platoon commanders, the machine-gun officer with the advanced guard, and the advanced guard commander's diary keeper.

Q. 28. Are the road sentries included in the strength of the piquet ?

A. 28. This depends on the standing orders or customs of the brigade or battalion supplying the piquets. If there is any doubt, the company commander of piqueting troops should ask the advanced guard commander.

Q. 29. How does the company commander know which section or sections to detail when the advanced guard commander gives him the minimum numbers for a piquet ?

A. 29. He has in his hand a statement giving the strength of every section in his company.

Q. 30. What should be the distance between—

(i) The scouts and the leading line of a piquet ?

(ii) The leading line and the supporting line ?

A. 30.

(i) This depends entirely on the ground. In scrub, very close ; in the open, fifty to a hundred yards.

(ii) This also depends entirely on the ground. In the open normally about two hundred yards.

Q. 31. Piquets may be sent to positions other than a position on a hill. Name one or more such positions.

A. 31. Nullahs which give a covered line of approach to the route from a flank must be blocked by a piquet. Frequently one side of the route is bordered by a stony plain dotted with bushes and scrub, and intersected with small nullahs. This is most dangerous ground, as the nullahs and scrub give a perfectly concealed " get away." Piquets must be put out to guard the flank. The column is generally far too long for a flank guard to be able to protect the whole length without dropping piquets.

Q. 32. Explain the duties of a pair of road sentries and what they do.

A. 32. Their main duties are to meet the rearguard commander (assuming he is withdrawing the piquets, as he usually does), and point out to him the position of the piquet, and what they consider the best place from which to give the " permissive signal."

Q. 33. What is the " permissive signal," and why is it so called ?

A. 33. It is the signal given by a rearguard commander to a piquet giving it permission to withdraw. It is not an order to withdraw, because the rearguard commander cannot, from his position on the route, know whether the tactical situation at the piquet position will permit of the piquet withdrawing. They may be pinned to their ground by enemy fire, or they may consider it essential for them to stay in order to assist another piquet which is hard pressed. The meaning of the signal may be summed up thus : " Your responsibility for protecting the column is over ; you should close on the column as soon as possible."

Q. 34. It may often happen that a piquet is not visible from the route at the point where the rearguard commander wishes to give the " permissive signal." How is this difficulty overcome ?

A. 34. The piquet commander must send down two or more men to a point from which the route and the piquet are both visible. These men act as a transmitting station for the signal to the piquet.

Q. 35. Show how the " permissive signal " is given.

A. 35. It is given in the way stated below by the use of the rearguard red flag, or a signalling flag. It may also be given by Morse or semaphore. One of these latter means should be used if there is any chance of the enemy seeing the red flag.

With the red flag :

Call Up.—Face the piquet and wave the flag from side to side above the head. Piquet repeats.

Piquet Number.—Give the number of the piquet in the same way as when signalling hits on the range, dips of the flag to the left for tens and to the right for units. Piquet repeats.

Withdraw.—Use the " wash out " signal on the range, the flag waved from side to side horizontally in front of the body.

Q. 36. Mention some ruses for inflicting casualties on an enemy who is following very closely on the heels of a piquet when it withdraws.

A. 36.

(i) The piquet withdraws a short way down the hill, takes cover, and picks off the enemy as they come over the skyline.

(ii) Piquet withdraws a short distance and prepares to meet the enemy with the bayonet when he advances.

(iii) Piquet withdraws a short distance, and then works round one or both sides of the hill, climbs up the far side, thus getting above and behind the enemy who are looking for them on the lower slopes of the hill.

Q. 37. If such a ruse is contemplated, what precautions should the piquet commander take beforehand ?

A. 37. He should warn his company commander, or the rearguard commander, and get his permission. One of the latter can then arrange covering fire to assist the ultimate withdrawal of the piquet, which may be difficult.

Q. 38. What orders does a piquet commander expect from the rearguard commander on reporting to him after withdrawing ?

A. 38. The rearguard commander will normally order the piquet to move forward along the column and rejoin the company, but he may, if he thinks it necessary, keep the piquet temporarily as a reinforcement for the rearguard.

Q. 39. Why is it necessary for a piquet commander to know the horizontal clock code ?

A. 39. From the piquet commander's position, usually on the top of a hill, he may see parties of the enemy, out of rifle range, and invisible to any artillery observer. By means of the horizontal clock code he can direct the fire of the guns on to such a party.

Q. 40. The advanced guard commander aims his " pointer staff " at the piquet position. When the piquet reaches this position, the piquet commander finds it is unsuitable tactically, as it does not protect the route as well as a position on the top of the hill, say one hundred yards farther on. What should the piquet commander do ?

A. 40. He should go to the better position, and inform his company commander of his action. This is allowable, as the advanced guard commander from his position in the valley frequently cannot see the actual top of a hill, but only what appears to him to be the top.

Q. 41. When the piquet commander reaches the position pointed out by the advanced guard commander, he finds that while it protects the route satisfactorily, it does not give great security to the piquet itself, being overlooked by a hill some two hundred yards farther on, the latter hill not being visible from the route. What should he do ?

A. 41. He should stay in the position pointed out. The tendency is always to climb higher and higher in search of a slightly better position for the piquet. The piquet commander should remember that his task is to protect the column, and if the position pointed out does this, and is reasonably secure for the piquet, he should stay in it, and not seek for a position where the piquet will be safer.

Q. 42. The " last away " party of the piquet as it withdraws has one or two casualties. What should the piquet commander do ?

A. 42. Casualties at such a moment at once produce a difficult situation. The whole advance is held up, as it is essential to get away the wounded men and their rifles and ammunition. This slows up the whole withdrawal, and the men carrying the casualties offer an easy target to the enemy, now encouraged by their success. If the enemy is close and there is no covered line of withdrawal for the casualties, the piquet commander has two alternatives—

(i) To stay where he is, protecting the wounded as best he can, and engaging the enemy with fire.

(ii) To counter-attack with a view to going back to his original position, and taking the wounded with him, or leaving them under cover in charge of a detachment.

In either of the above two alternatives, he must let the rearguard commander know what has happened, and what he is doing, and wait until the rearguard commander forces the enemy to withdraw, and so enables the piquet to get away, with its wounded, unmolested.

GLOSSARY OF USEFUL PUSHTU WORDS

ă is pronounced like the *u* in " but."
ā is pronounced like the *a* in " answer."
e is pronounced like the *a* in " paper."
i is pronounced like the *ee* in " keen."
u is pronounced like the *oo* in " loot."
Gh is a harsh guttural sound with no parallel in English.
K̄h and C̄h are pronounced as the *ch* in " loch."

Ground.

Flat	Sām, Hămwār, Bărābăr.	Hilly	Kohi (uncommon).
Rocky	Kănredz (uncommon).	Rough	Lwār.
Smooth	Sām.	Wooded	Transpose, using Jăngăl or Wune.
Ploughed	Transpose, using Yewă or Hāl.	Grassy	Transpose, using Wāk̄hă.
Irrigated	Transpose, using Oba or Lund.	Dry	Wăch.
		Wet	Lund.

Bushes and Trees.

Pine	Năk̄htăr.	Camel thorn	Gurguri.
Tree	Wunā.	Deodar	Deār.
Plane	Chenār.	Poplar	Spedār.

Colours.

Green	Shin (Fem. Shnā).	Red	Sor (Fem. Srā).
Blue	Shin, Nil, Ăsmāni.	Yellow	Ziyer.
Brown	K̄hăr.	White	Spin.
Black	Tor.		

Hill Forms.

Mountain	Ghăr, Koh.	Knoll, Mound	Ghundai.
Small hill	Derai, Wătăkai.		
Saddle	Kotăl.	Peak	Săr.
Gorge	K̄hwăr.	Pass	Dără, Nărai, Kotăl.
Plateau	Răghză.	Ravine	Tăngi.
Spur	Wărsăk.	Ridge	Kămăr.

Animals.

Horse	Ās.	Mule	Kăchar.
Cow	Ghwā.	Sheep	Găd, Berai, Dumba.
Dog	Spe.	Goat	Păsāh.
Hen	Chărgă.	Mosquito	Māshai.
Flea	Wrăgă.	Bed bug	Mungăr.

People.

Headman	Mălik.	Villager	Kăli-wāl, de kăli Sări.
Child	Băchă, Wrukai, Māshūm.	Boy	Hălăk.
Woman	Khăză.	Assembly	Jirgă.
Nomad	Kuchi, Powinda, Ghilzai.	Camp of Nomads	Kirri.
Tribal levy	Khăssădār.	Pursuit party	Chighă.

Water.

Spring	Chină.	Stream	Toi.
Pond	Dauda.	Well	Kuh.
Water	Oba.	Dam	Bănd.
Irrigation Channel	Kărez.	Water course	Ălgăd.
Ford	Gudār.	Bridge	Phul.

Prepositions.

Up	Portă, Pās.	Down	Kuz.
Above	Pās.	Below	Lānde.
Behind	Rusto, Păstănă, Pă shā.	In front of	Măchkhe.
In	Pa...ke.	On	Pa...bānde.

Adverbs.

Quickly	Zăr.	Slowly	Ro.
At once	Pa de sāt, Faurăn.	Now	Os.
Later	Rusto.		

Miscellaneous.

Reprisals	Bărămtă.	Village	Kăli.
Tower	Burj.	Stone breastwork	Săngăr.
Trench	Morchă.	Escort	Bădrăggă.
Enemy	Dukhmān.		

Note.—The author is indebted to two officers of his regiment for assistance in compiling the foregoing.

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WELLINGTON WORKS, ALDERSHOT.
AND AT LONDON AND PORTSMOUTH